

SHOUT RF02 082915 – Erika Mission Summary

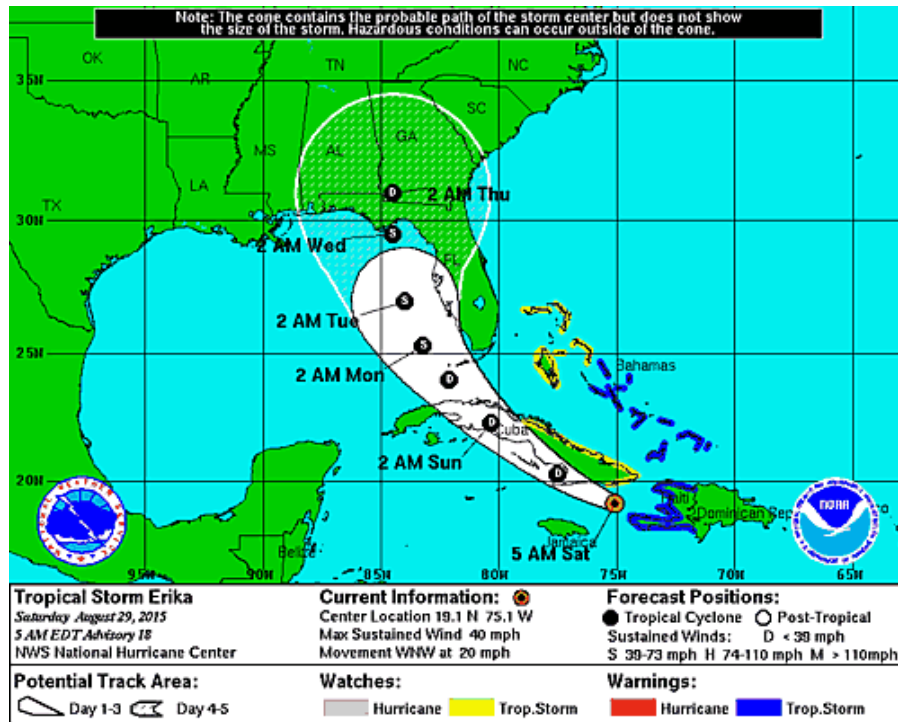
First shift Mission Scientists: Jason Dunion, Paul Newman, Gary Wick
 Second shift Mission Scientists: Michael Black, Natalie Laudier, and Pete Black
 Third shift Mission Scientists: Anthony Didlake, Sarah Griffin, John Walker

Second SHOUT Research Flight and second mission to study T/S Erika. Was extensive discussion of whether to proceed with flight given state of Erika, its forecast path along Cuba, and its prospects for further intensification. Opted to go ahead with mission given the possibility of the system of posing a future threat to US Coast and the opportunity to test out instrument repairs conducted over the past two days.

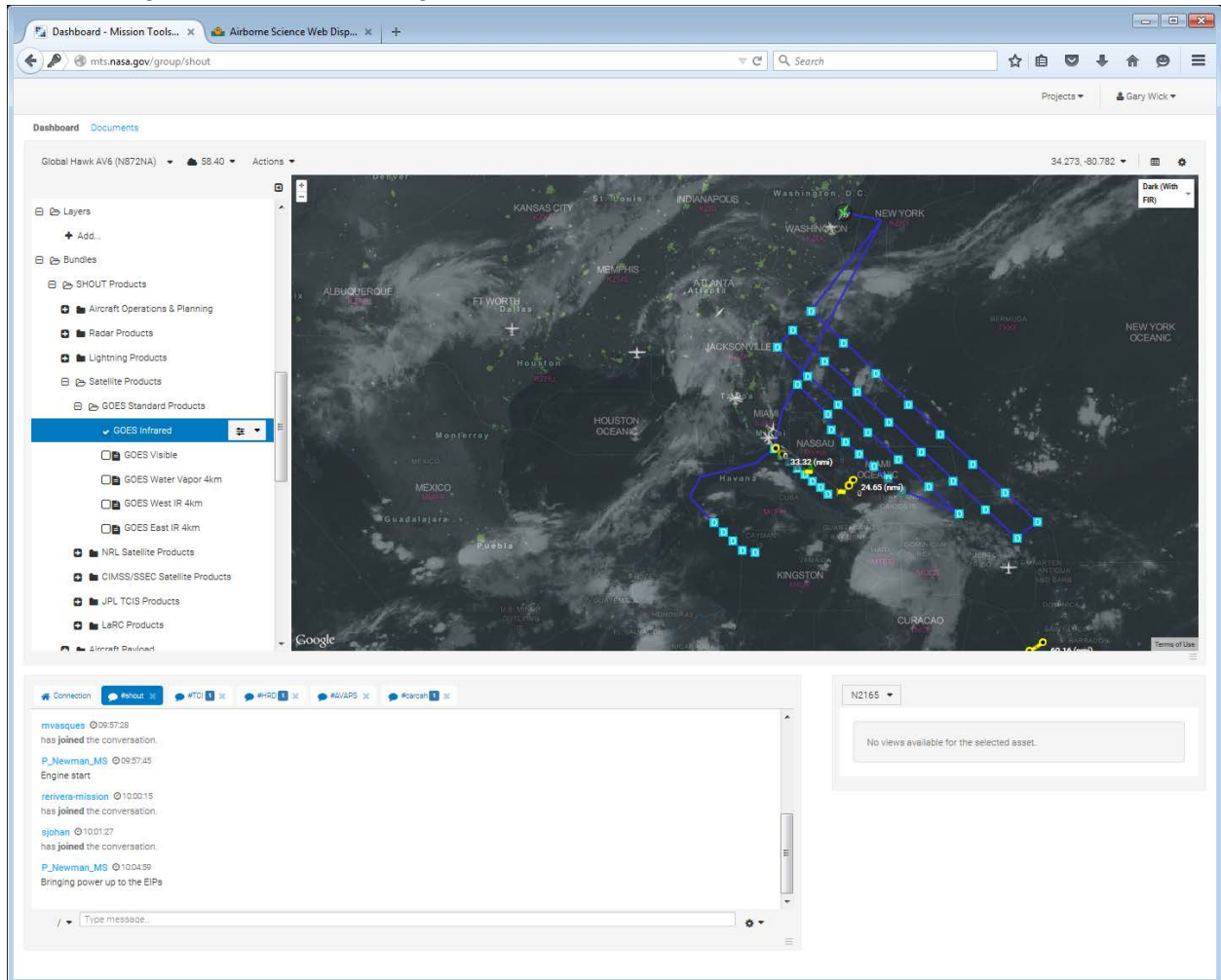
Mission plan begins with a lawnmower to sample the environment and then includes several race track loops south of the Bahamas. The filed plan also included a loop south of Cuba to preserve the option of flying in that region. The understanding was that it was an either/or with regards to the race tracks near the Bahamas or the sampling south of Cuba.

We have requested the possibility of also sampling in the northeastern Gulf of Mexico based on forecast sensitivity runs, but since this flight represents a one-day slip, the box filed did not include the area west of Florida. Discussed with Tom during T-0 meeting and he was going to consider.

Forecast track at mission start



Full filed flight track with IR background

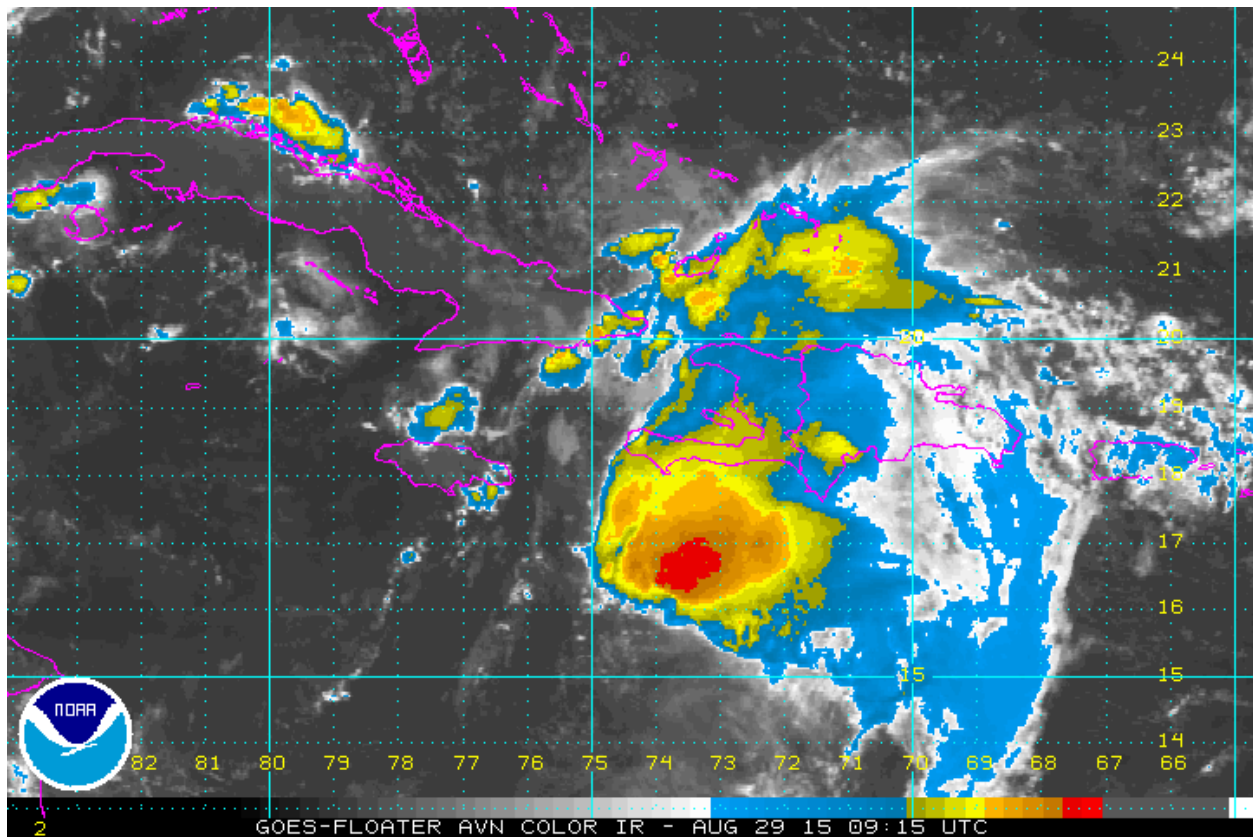


0958 Engine start

1021 Pin pulled.

1040 Ku at Armstrong failed, so switched to WFF Ku. Using Telstar14R (Atlantic) satellite (different than briefed) - should cover the current planned route

1059 Takeoff.



0957Z Engine Start

1005 Instruments coming up

1021 Pin pull

Issues with bringing up Ku on SatMex satellite. Required use of dish at AFRC but dish not currently enabled there. Armstrong dish not transmitting so will switch back to dish here and the Atlantic satellite. Projected 20 min period to reconfigure

1040Z Ku up

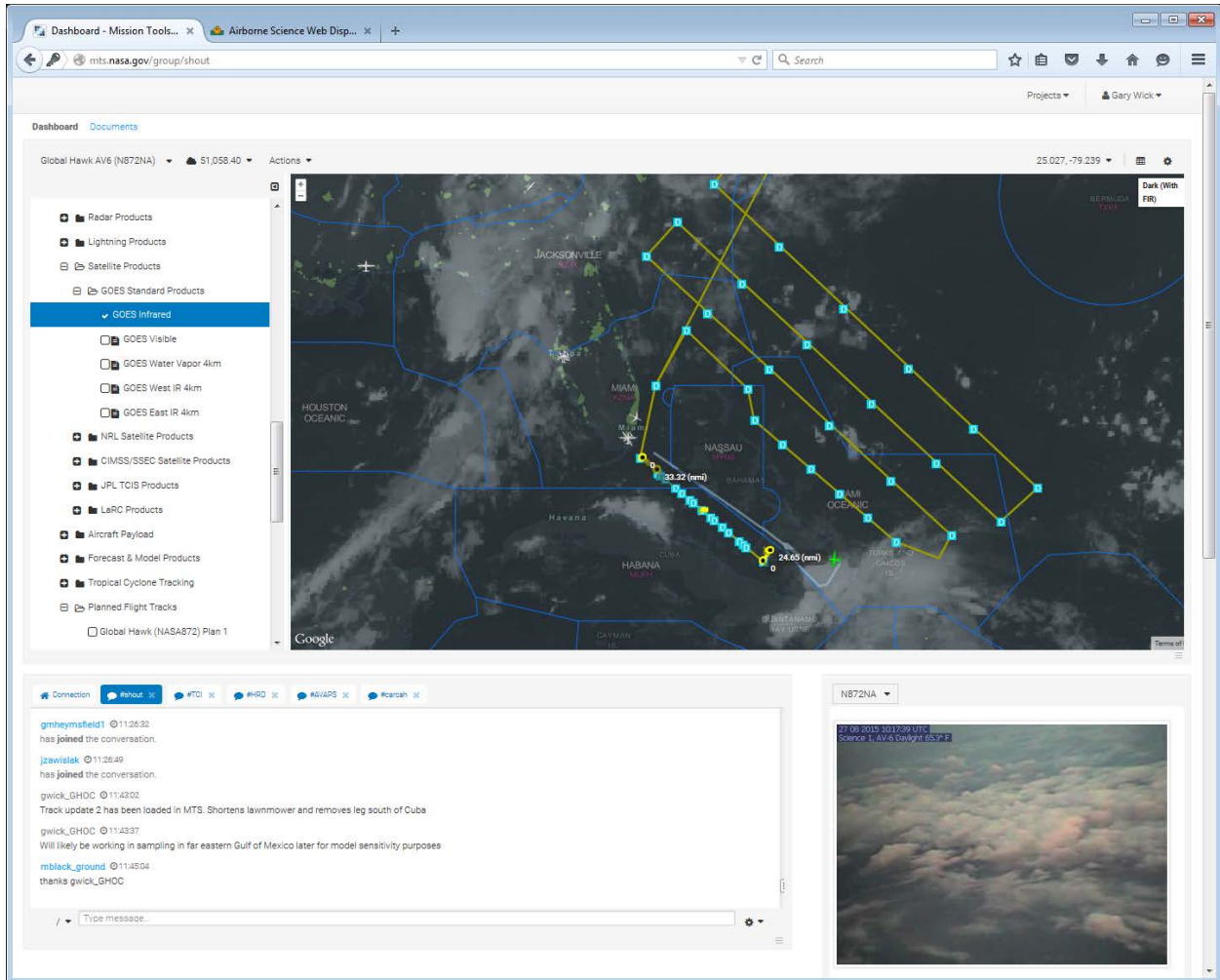
1055 Taxi

1059Z Takeoff

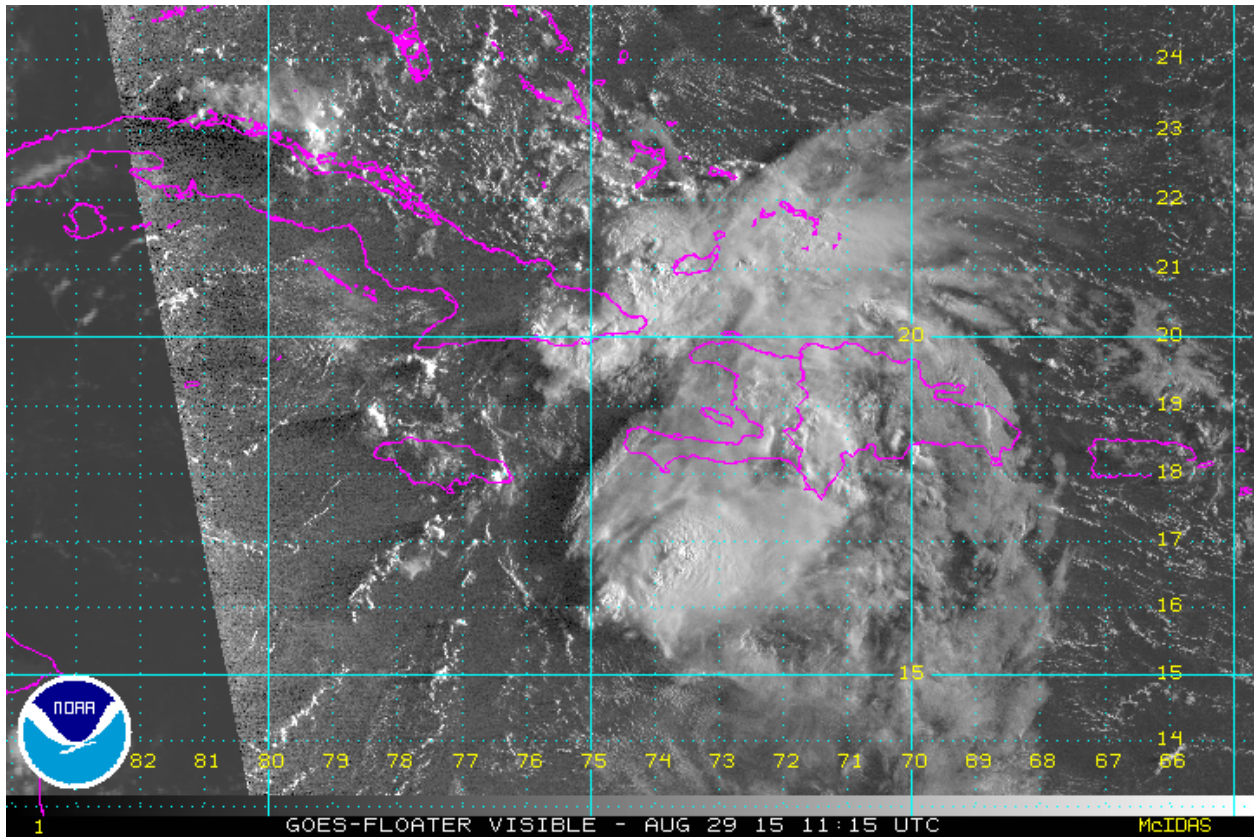
Had discussion with Tom about potential to get into the Gulf. His issues was with Houston airspace since they had not even been notified of our flight (issue again was the fact that the flight slipped a day and we were working with the box submitted for the day before. Would be

ok to do the eastern part of the gulf in Miami oceanic and JAX FIR's. Jason is working up a plan that drops in those regions only

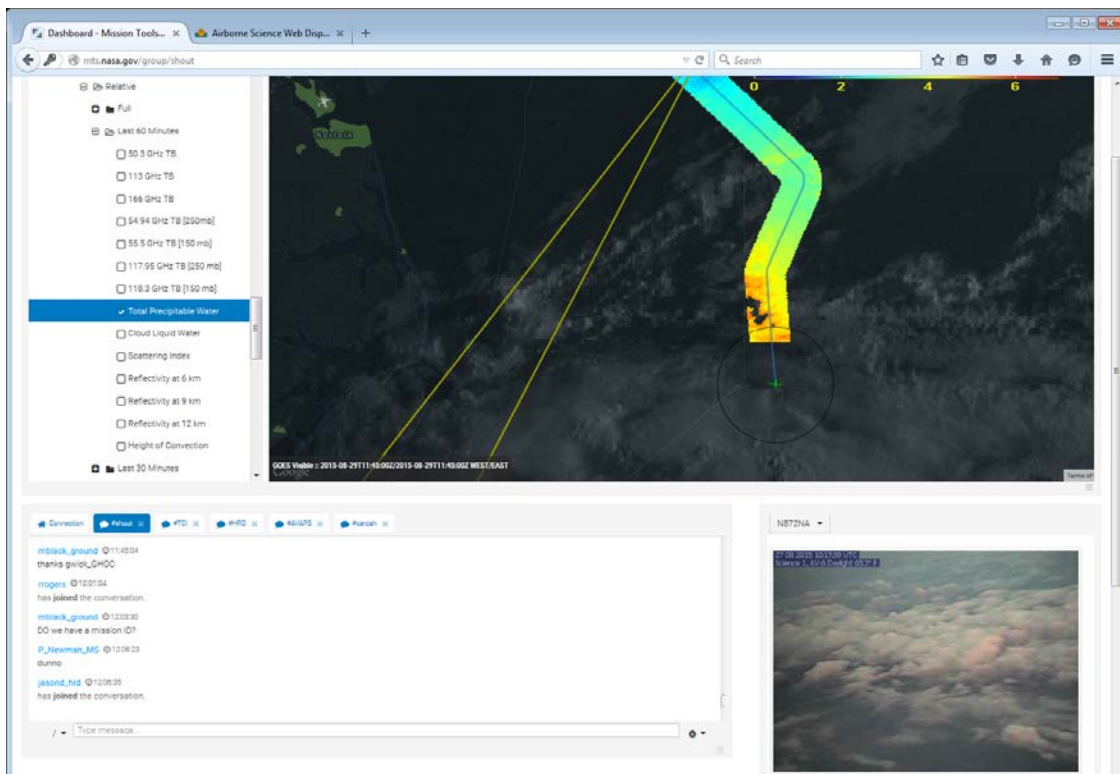
1141Z HAMSR (Boon) reports their processor almost caught up - their data should be current in ~5 minutes. HIWRAP also says looking good



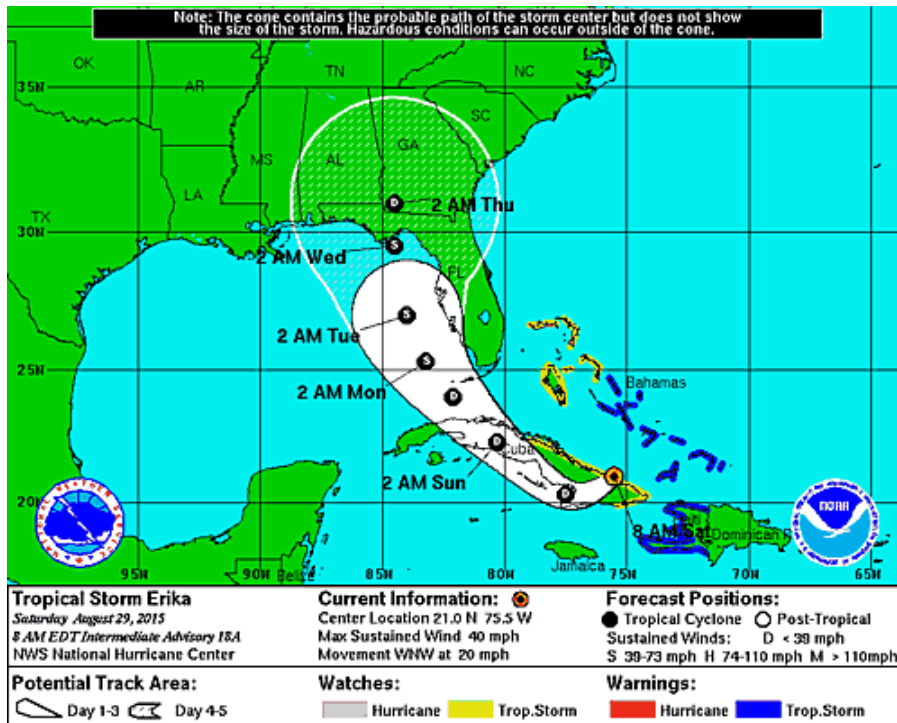
12Z screen grabs



1208Z seeing HAMSr TPW increase as approach convection (60 min TPW product)

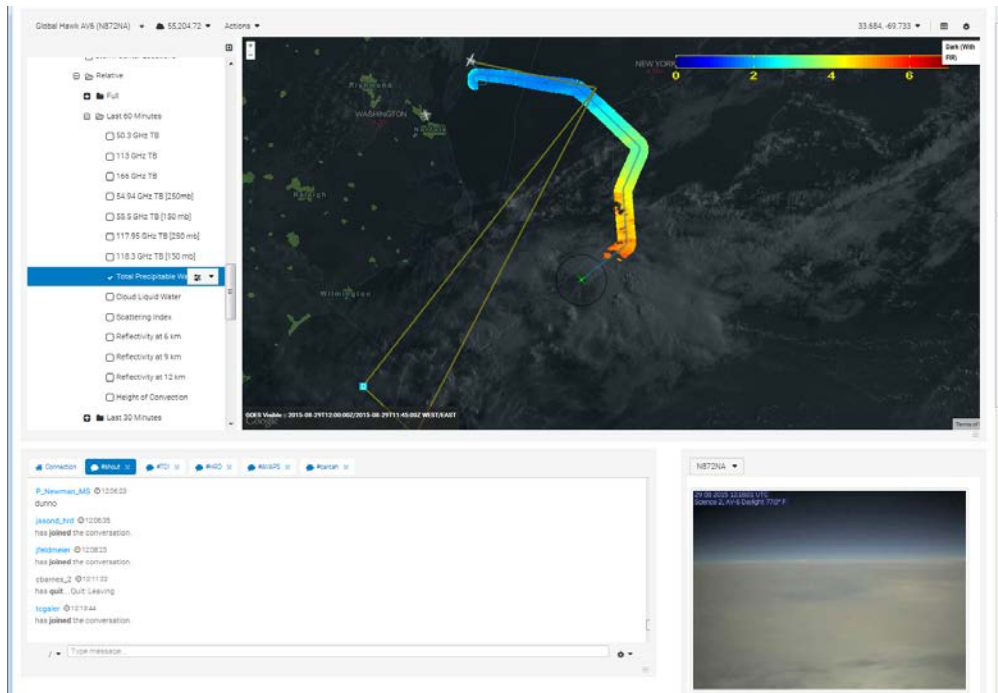


1210 Z New track forecast from NHC:



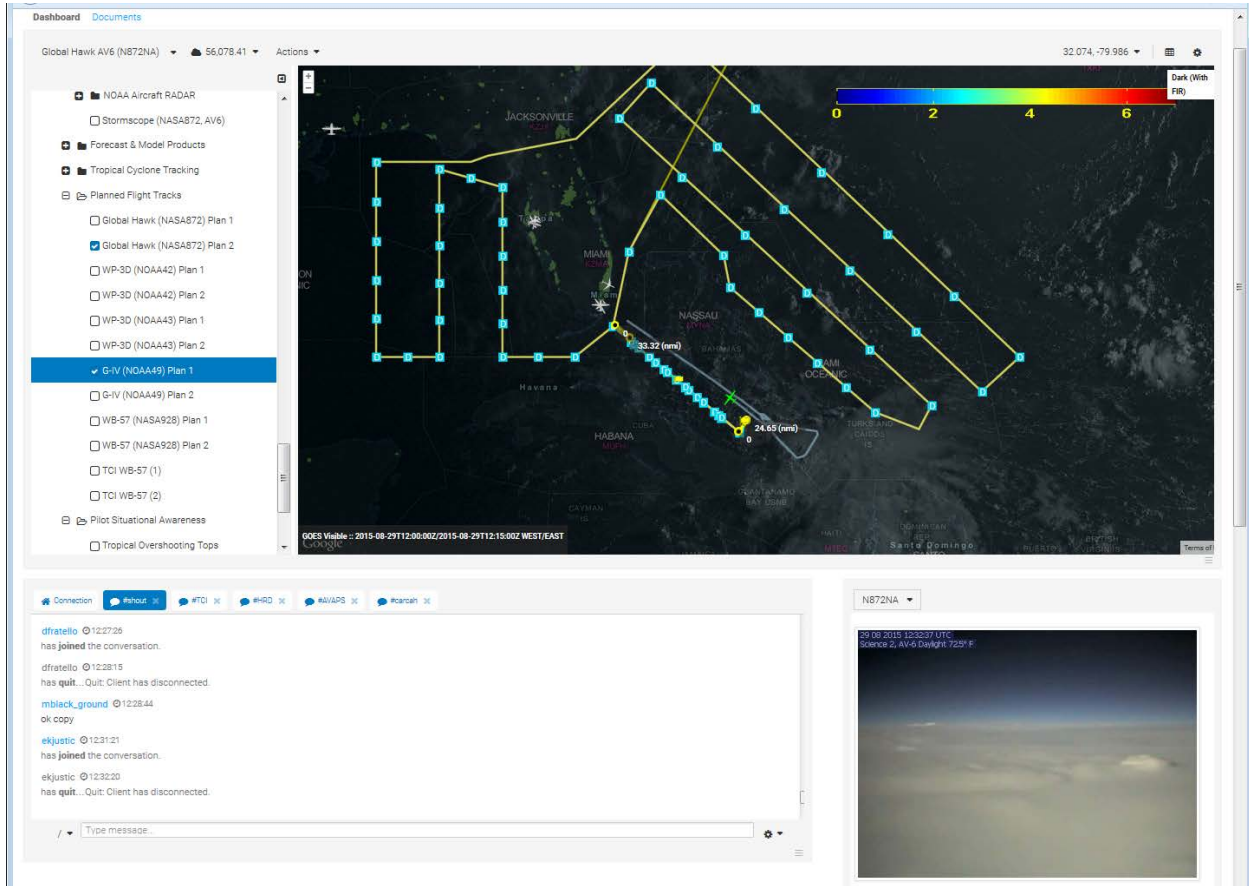
1210 Z: Tom Miller came back and reported that they are good to do the full 3 legs in the Gulf of Mexico as originally desired - Ok to enter Houston FIR and drop. Great News!

1218Z More HAMSR:



1220Z: Mission reports that first planned drop will be in air traffic corridor. Asked if possible to drop at an earlier time. Pilots still working previous track change - will get back to us

1232Z: Following graphic shows Gulf path to be added:



1238 Z HIWRAP seeing nice image on their laptop - will share screen grab: Corresponding daylight image below



1242Z Passing some radar echoes now (below):

The screenshot shows a web browser window with the URL `mts.nasa.gov/group/shout`. The dashboard displays a radar reflectivity map for the Global Hawk AV8 (N872NA) at coordinates 32.838, -74.412. The map shows radar echoes in various colors (green, yellow, orange, red) over a dark background. A color scale on the right indicates reflectivity levels from 0 to 6. The dashboard includes a sidebar with various product categories such as Radar Products, Lightning Products, and Satellite Products. A chat window at the bottom left shows a conversation with users like `dtharello` and `ekjustic`. A video window at the bottom right shows a live feed of the sky, similar to the one in the first image, with the text `09 08 2015 12:42:20 UTC Science 2, AV-6 Daylight 70.7° F`.

1245Z Daylight camera below



The screenshot displays the NASA Airborne Science Web Dashboard. The main window shows a radar plot with a color scale ranging from 180 to 300. The plot is overlaid on a satellite image of the Earth, with a yellow box highlighting a specific area. The dashboard includes a sidebar with various data options, a chat window at the bottom left, and a small video window at the bottom right showing the daylight camera view.

Dashboard - Mission Tools... x Airborne Science Web Disp... x +

mts.nasa.gov/group/shout

Global Hawk AV8 (N872NA) 56,509.91 Actions 33.271, -75.280

Storm Center Locations

Relative

Full

Last 60 Minutes

50.3 GHz TB

113 GHz TB

186 GHz TB

54.94 GHz TB [250ms]

55.5 GHz TB [150 ms]

117.86 GHz TB [250 ms]

118.3 GHz TB [150 ms]

Total Precipitable Water

Cloud Liquid Water

Scattering Index

Reflectivity at 6 km

Reflectivity at 9 km

Reflectivity at 12 km

Height of Convection

Last 30 Minutes

Dark (With SLP)

180 200 220 240 260 280 300

WINDSPEED

003 Video - 2015-08-29T12:30:00Z-2015-08-29T12:30:00Z WEST/EAST

Connection

mbnick_ground @ 12:28:44
ok copy

ekjustic @ 12:31:21
has joined the conversation.

ekjustic @ 12:32:20
has quit. - Quit: Client has disconnected.

ekjustic @ 12:43:18
has joined the conversation.

stivaweb @ 12:45:03
has joined the conversation.

Type message...

N872NA

29 08 2015 12:45:38 UTC
Science 2, AV-6 Daylight 69.8° F

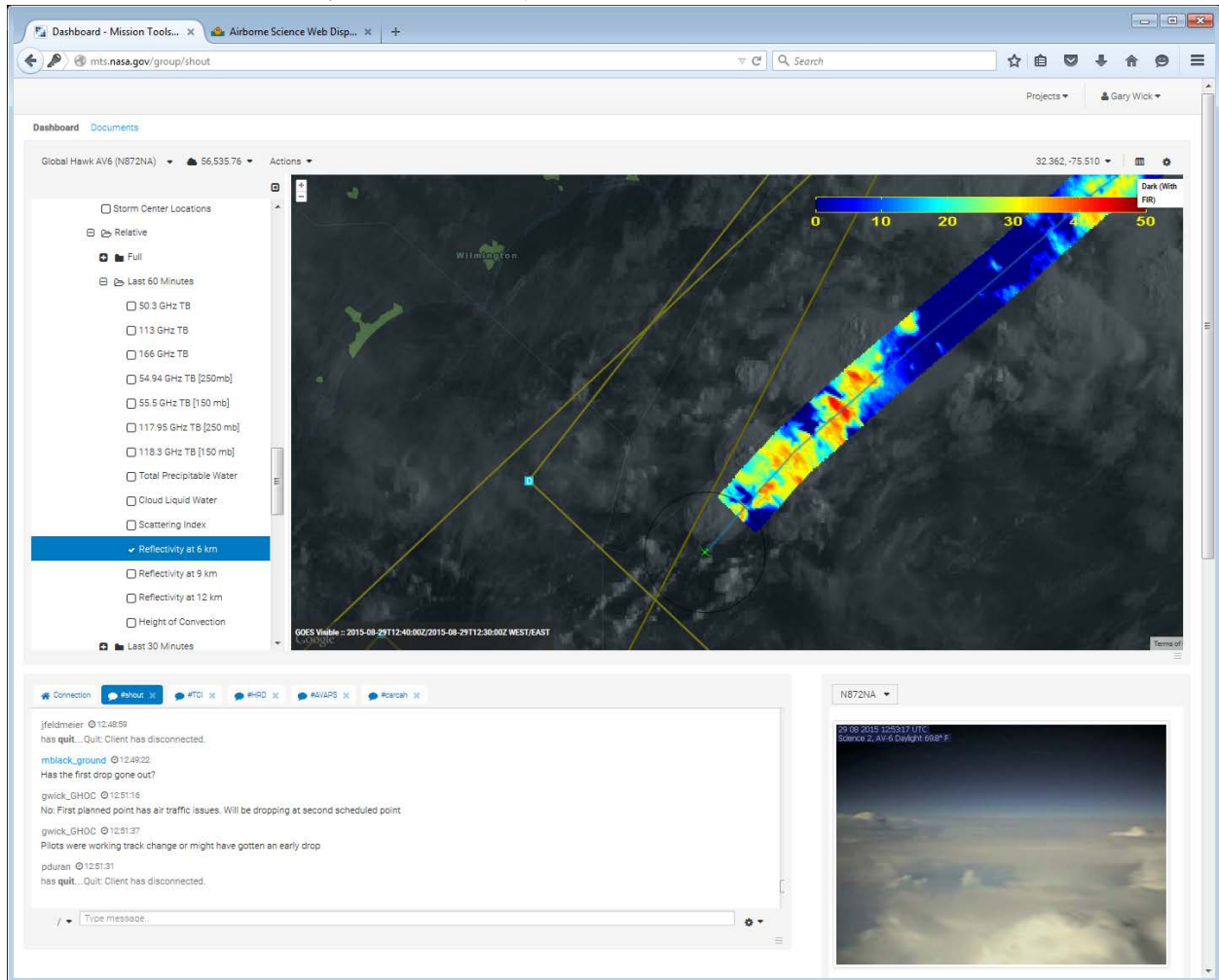
above is HAMSRS 113 GHz: Note correspondence to echo cells from before

1248Z daylight shot below



1250Z HIWRAP reporting that they are getting regular 15 minute updates on a web page:
http://meso-a.gsfc.nasa.gov/912/radar/storm/SHOUT/HIWRAP_KML/HIWRAP_RealTimeVerticalPlot.png

1253Z HAMSRS reflectivity. Good correspondence with radar



Dashboard - Mission Tools... x Airborne Science Web Disp... x

mti.nasa.gov/group/shout

Global Hawk AVIS (N872NA) 36,497.70 Actions 22,643, -76,400 Dark (On) FB

115W-Hu-25MS

Satellites

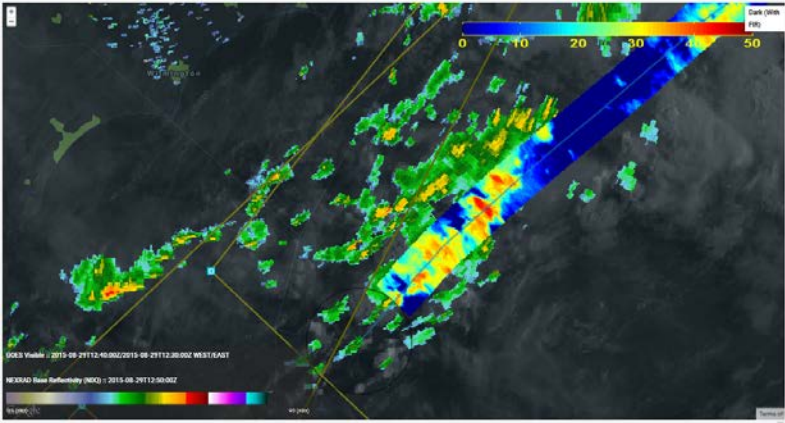
- Add a Satellite
- Set Observer Position

Layers

- Add...

Bundles

- SHOUT Products
 - Aircraft Operations & Planning
 - Flight Information Regions and Boundaries
 - VACAPES Test Tracks
 - Range Rings
 - Special Activity Airspace
 - Temporary Flight Restrictions
 - Radar Products
 - MEXRAD Base Reflectivity (R02)
 - 02 1 Hour Precipitation
 - 02 24 Hour Precipitation
 - 02 48 Hour Precipitation



0083 Yield - 2015-08-29T12:40:00Z/2015-08-29T12:38:00Z WEST/RAST

MEXRAD Base Reflectivity (R02) - 2015-08-29T12:38:00Z

Connection: Inval... x ATD... x RHO... x AGI... x Aram... x

/feldmawer @12:48:53
has quit: Quit: Client has disconnected

mblack_ground @12:49:22
Has the first drop gone out?


gwick_SHOC @12:51:18
No: First planned point has air traffic issues. Will be dropping at second scheduled point

gwick_SHOC @12:51:37
Pilots were working back change or might have gotten an early drop

pdurbin @12:51:31
has quit: Quit: Client has disconnected

Type message

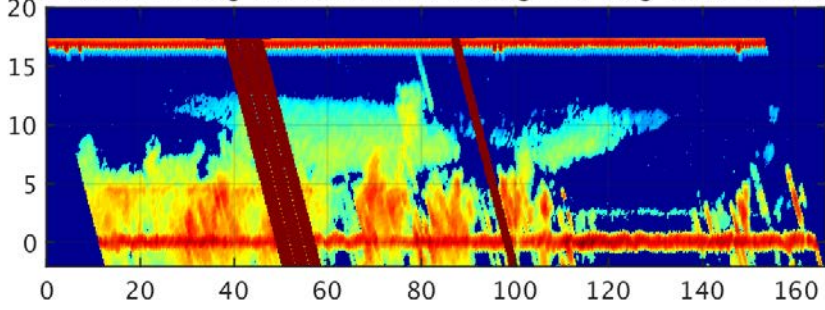
N872NA



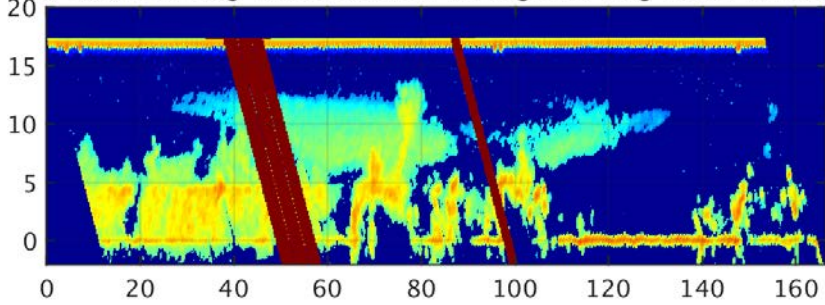
2015-08-29 12:48:53 UTC
Global Hawk AVIS (N872NA)

From HIWRAP site:

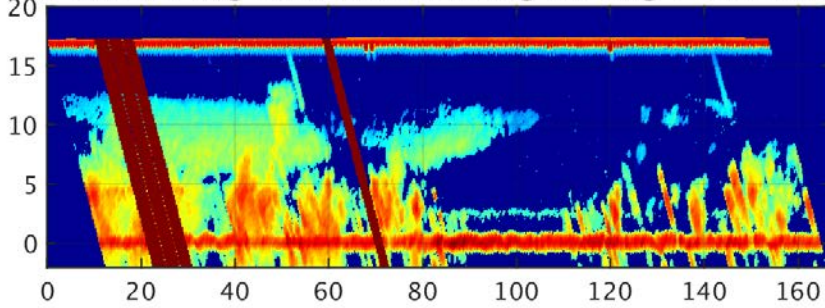
Ku-Band: 29-Aug-2015 12:40:14 through 29-Aug-2015 12:55:11



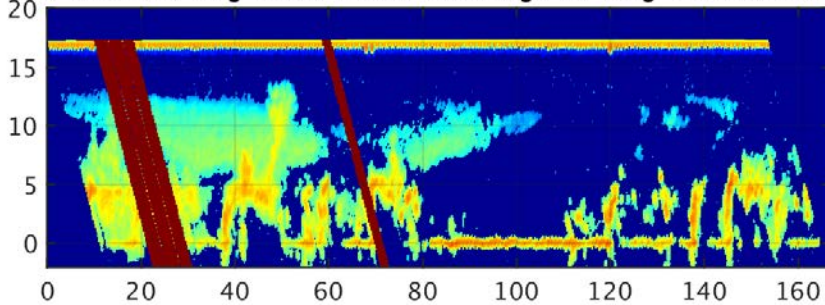
Ka-Band: 29-Aug-2015 12:40:14 through 29-Aug-2015 12:55:11

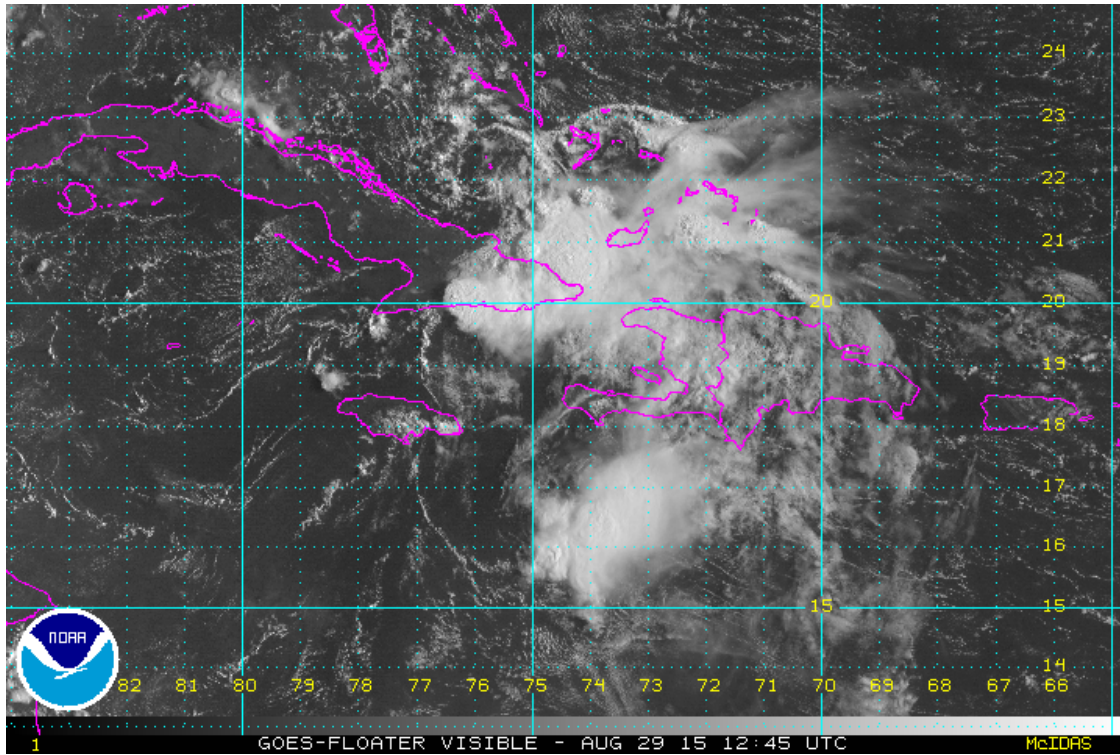


Ku-Band: 29-Aug-2015 12:42:55 through 29-Aug-2015 12:57:56



Ka-Band: 29-Aug-2015 12:42:55 through 29-Aug-2015 12:57:56

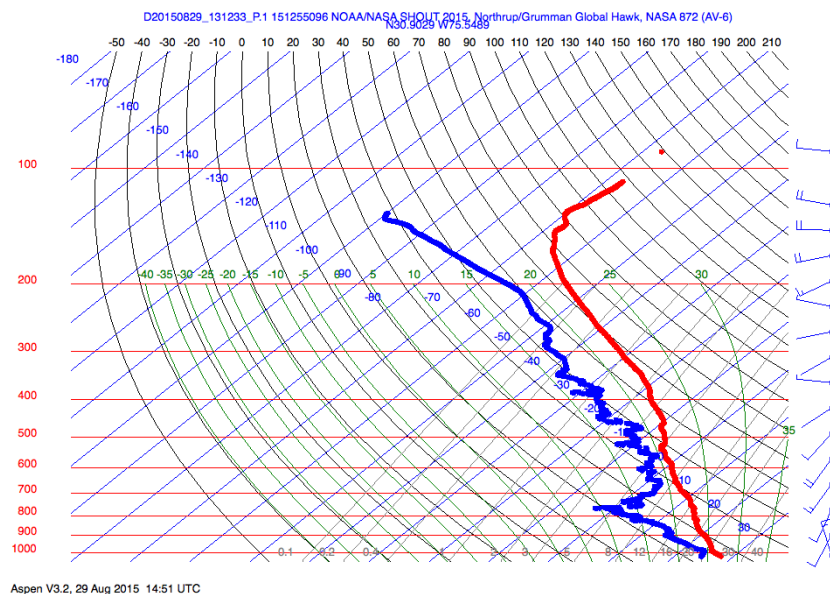




1300 Turned onto 1st lawnmower leg. Flying to the SE

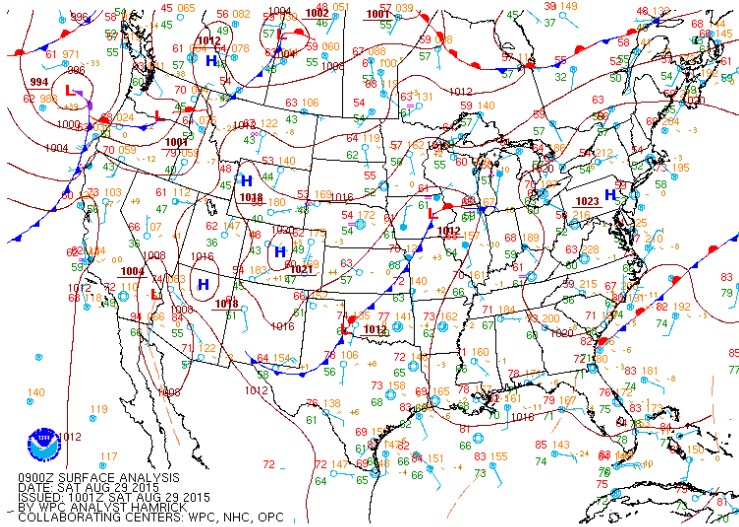
1308Z AVAPS loading first sonde - successfully loaded

1312Z Drop 1 at scheduled location 2. Good release and data return (skipped location 1 due to air traffic)

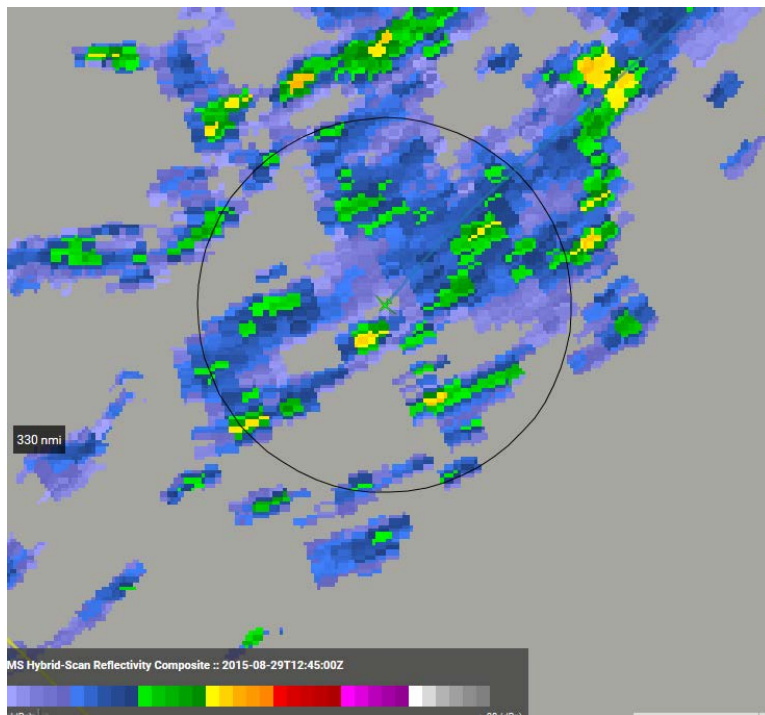


Tom came back to warn that last two lines of the lawnmower pattern have good deal of air traffic - may be difficult to perform drops in those regions.

1315 Overflow a stationary front while in transit from WFF to 1st lawnmower leg. See below in surface analysis off of N. Carolina.



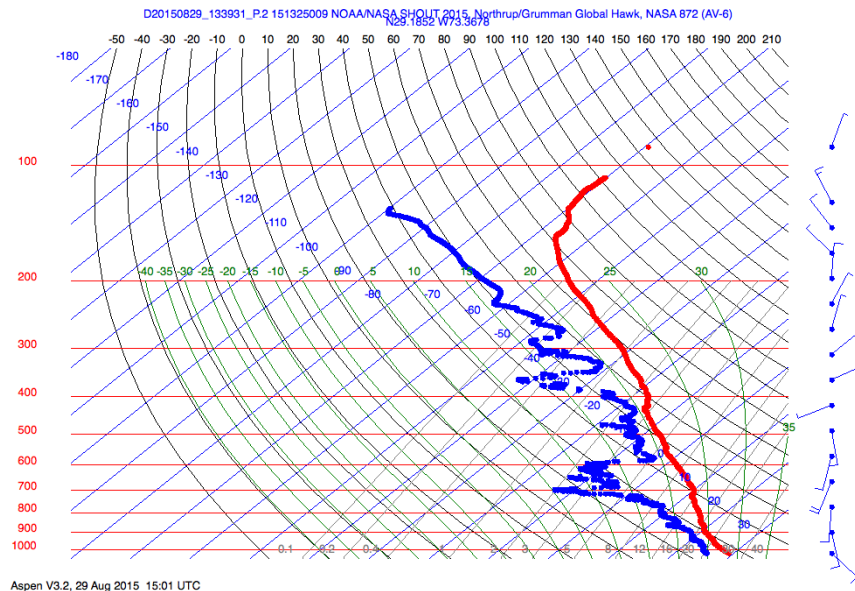
Both HAMSAR and HIWRAP got good data over these systems & a nice cell appeared in the nose camera. In the MS hybrid scan reflectivity, you can see a nice cell a few nm from the GH nose. The vis image shows this cell quite nicely.



Boon from JPL e-mailed sequence of images he collected during same period

1335Z Sonde 2 loaded

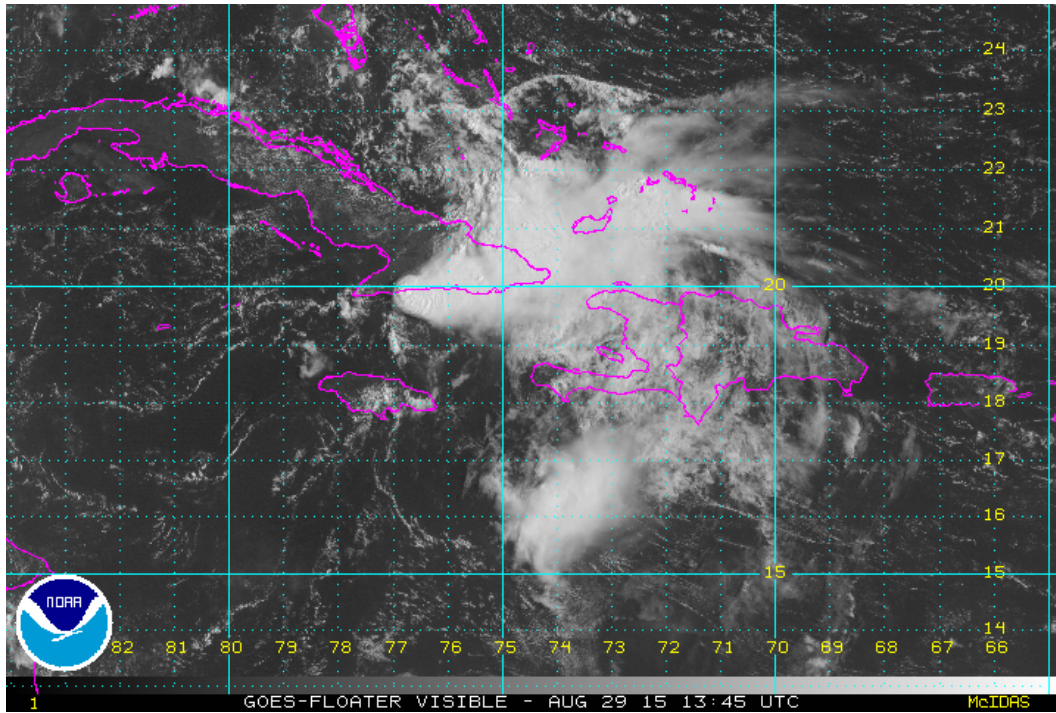
1338Z Sonde 2 released, drop location 3 - good drop



1350Z LIP team reports that they are not seeing data from their forward up-looking field mill on the engine nacelle. They believe the problem is related to the RICO (sp?) box located in zone 61, but will need to run some tests to isolate between the box and the mill itself. A change of the box would require maybe a half hour or so by their estimates. A change of the field mill would require more time and could not be done if trying to fly again the next day. They say the system would be ok to fly again - this mill is largely redundant and is the "best" to fail - but would like to repair as soon as practical. Will need to schedule time for them during next available period.

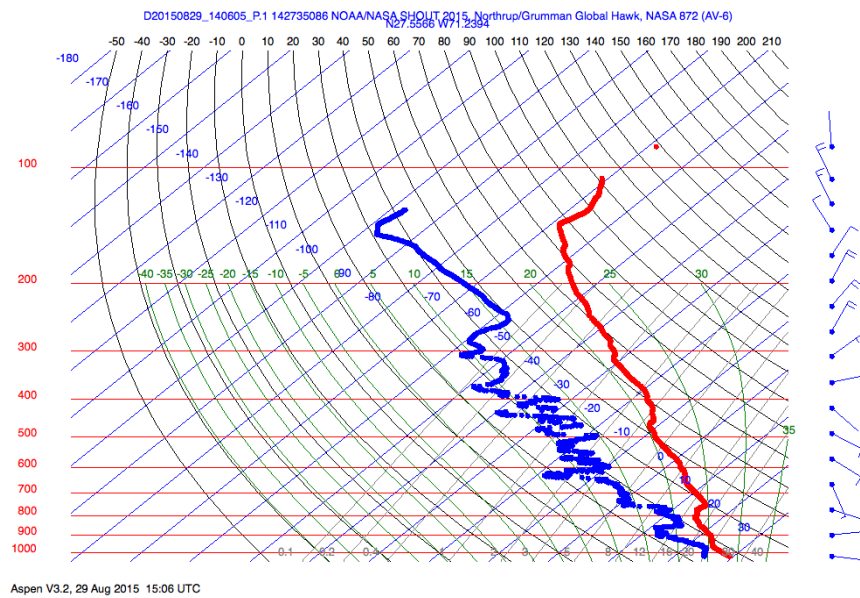
1354Z Saw raw data from first sonde on the ground - ftp'd through

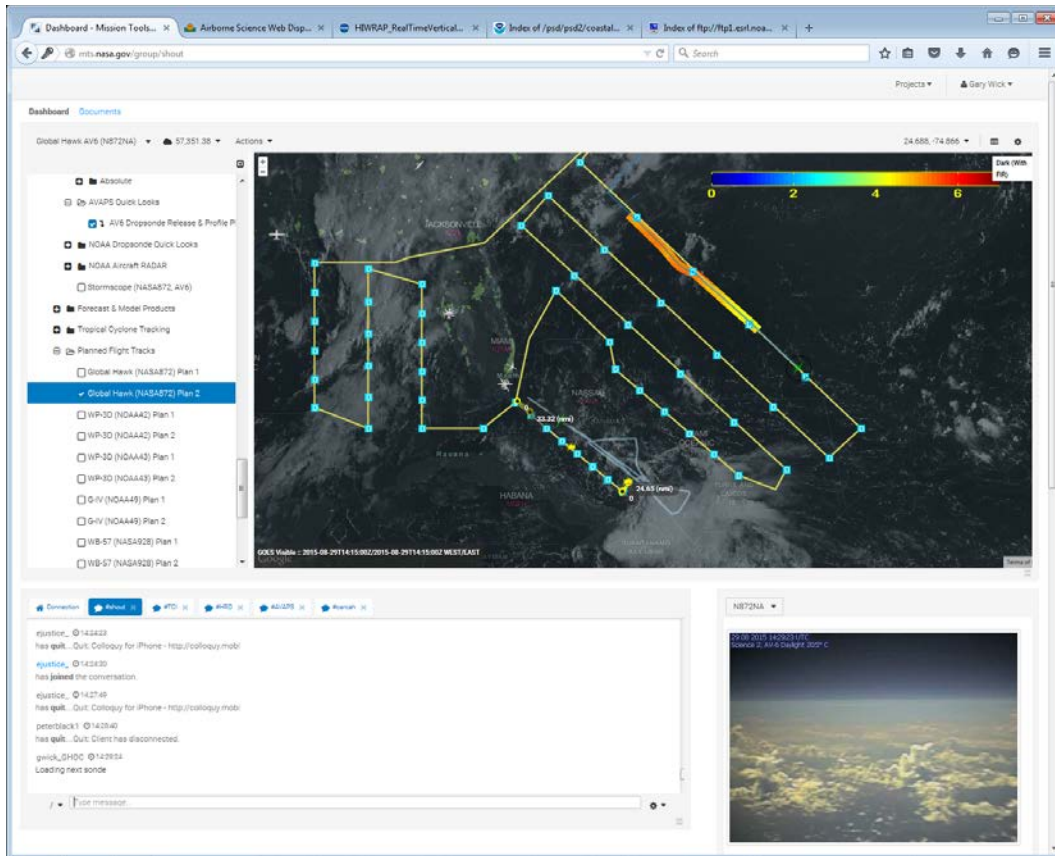
1358Z Seeing that NHC has declared Erika a remnant. (Tropical Depression Erika dissipated at 9:30 am EDT). Pressing on...



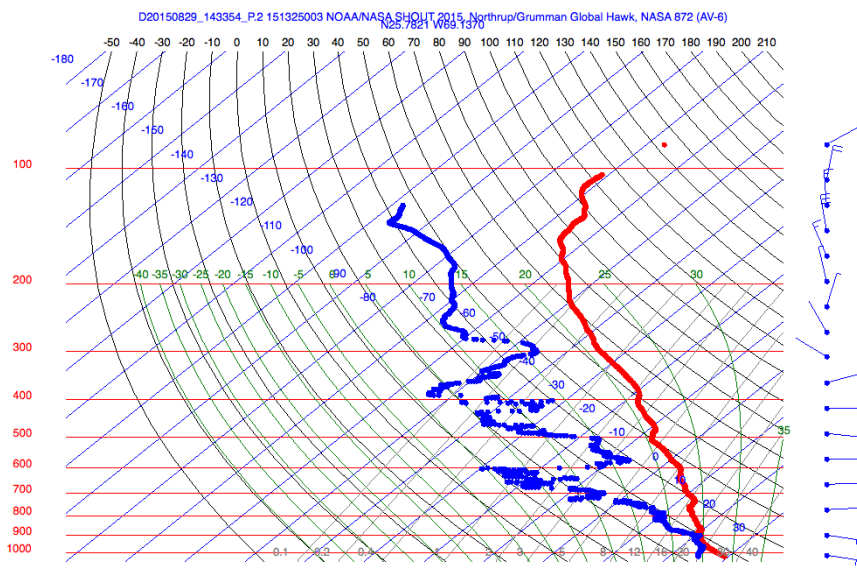
1401Z Next sonde loaded

1406Z Drop 3 at location 4 - Good release





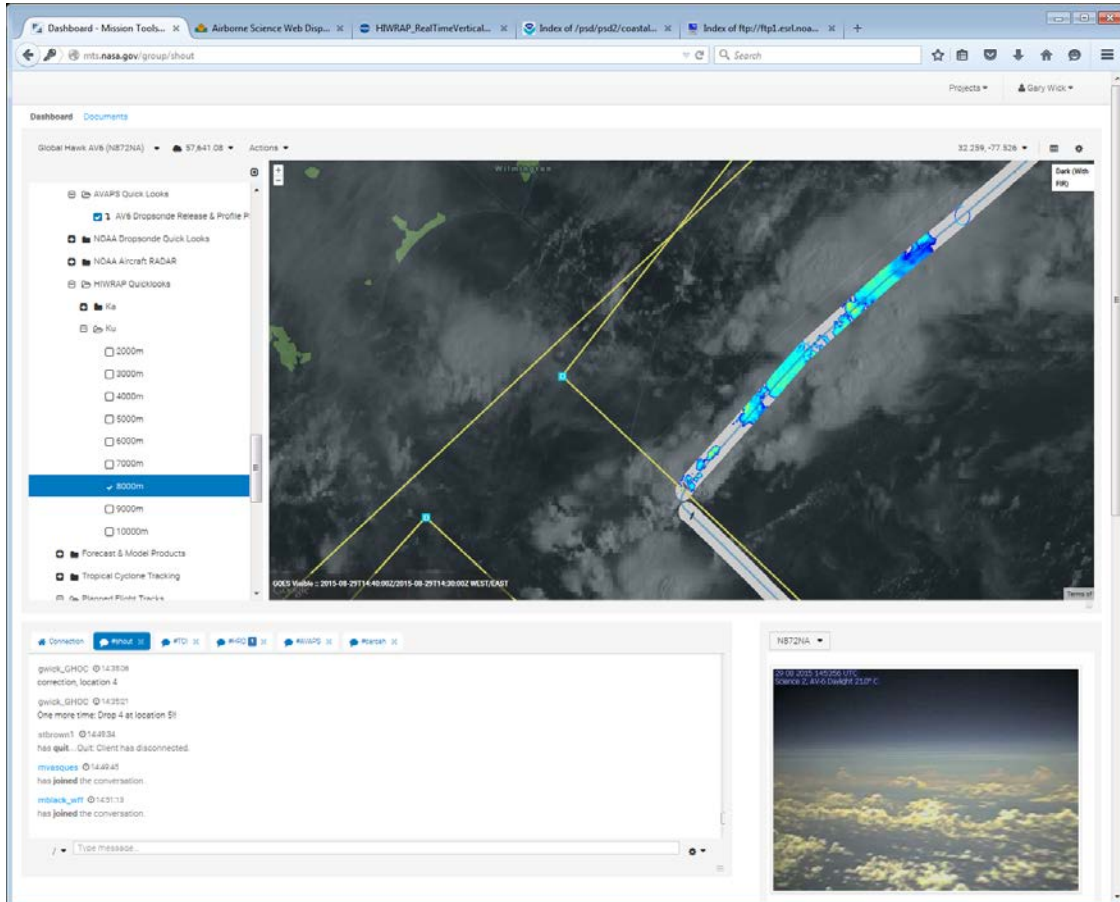
1429Z Loading sonde 4
 Raw data from third sonde is on ground
 1433Z Drop 4 at location 5 - good release



Aspen V3.2, 29 Aug 2015 15:10 UTC

1453Z HIWRAP notes that they have products up and available on MTS. Select aircraft payload -> HIWRAP Quicklooks -> Ku/Ka and level

Below example of Ku at 8000 m



below same at 2000m

Dashboard - Mission Tools... Airborne Science Web Disp... HIWRAP_RealTimeVertical... Index of /psd/psd2/coastal... Index of /hp/ftp1.les1.noaa...

mtsnasa.gov/group/shout

Projects | Gary Wick

Dashboard Documents

Global Hawk AV8 (N872NA) | 37,674.87 | Actions | 32,806, -78,485 | Dark (With PR)

- JPL I/LIS PRODUCTS
- LaRC Products
- Aircraft Payload
 - Stormscope (NASAB72 AV8)
 - HAMSR Quick Looks
 - AVAPS Quick Looks
 - 1 AVIS Dropponde Release & Profile P...
- NCAA Dropponde Quick Looks
- NOAA Aircraft RADAR
- HIWRAP Quicklooks
 - Ka
 - Ku

2000m
3000m
4000m
5000m
6000m
7000m
8000m

00S Yuba - 2015-08-29T14:40:00Z/2015-08-29T14:20:00Z WEST/EAST

gwick_3SHOC @mission
One more time: Drop 4 at location 5!

strowm1 @14:43:34
has quit. Quit: Client has disconnected.

mvesque @14:48:45
has joined the conversation.

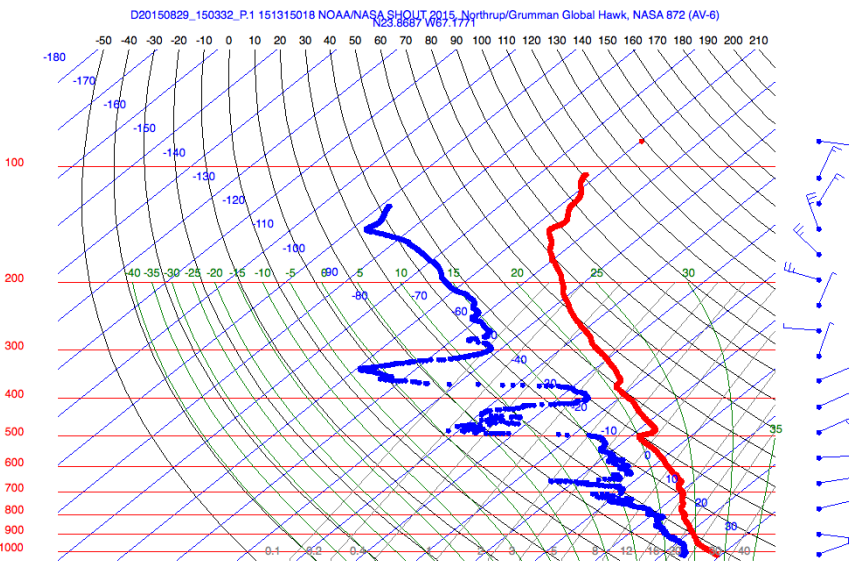
mblack_wff @14:51:13
has joined the conversation.

gmhymalad01 @14:53:33
you can get an experimental HIWRAP vertical refectivity section at: http://meso-a.gfc.nasa.gov/912/radar/storm/SHOUT/HiWRAP_Ku/HiWRAP_RealTime/verticalPlot.png No precipo until much later

Type message...

N872NA
30 of 2015-1450:0110L
SOURCE 2, AVIS Droppond 213P.C.

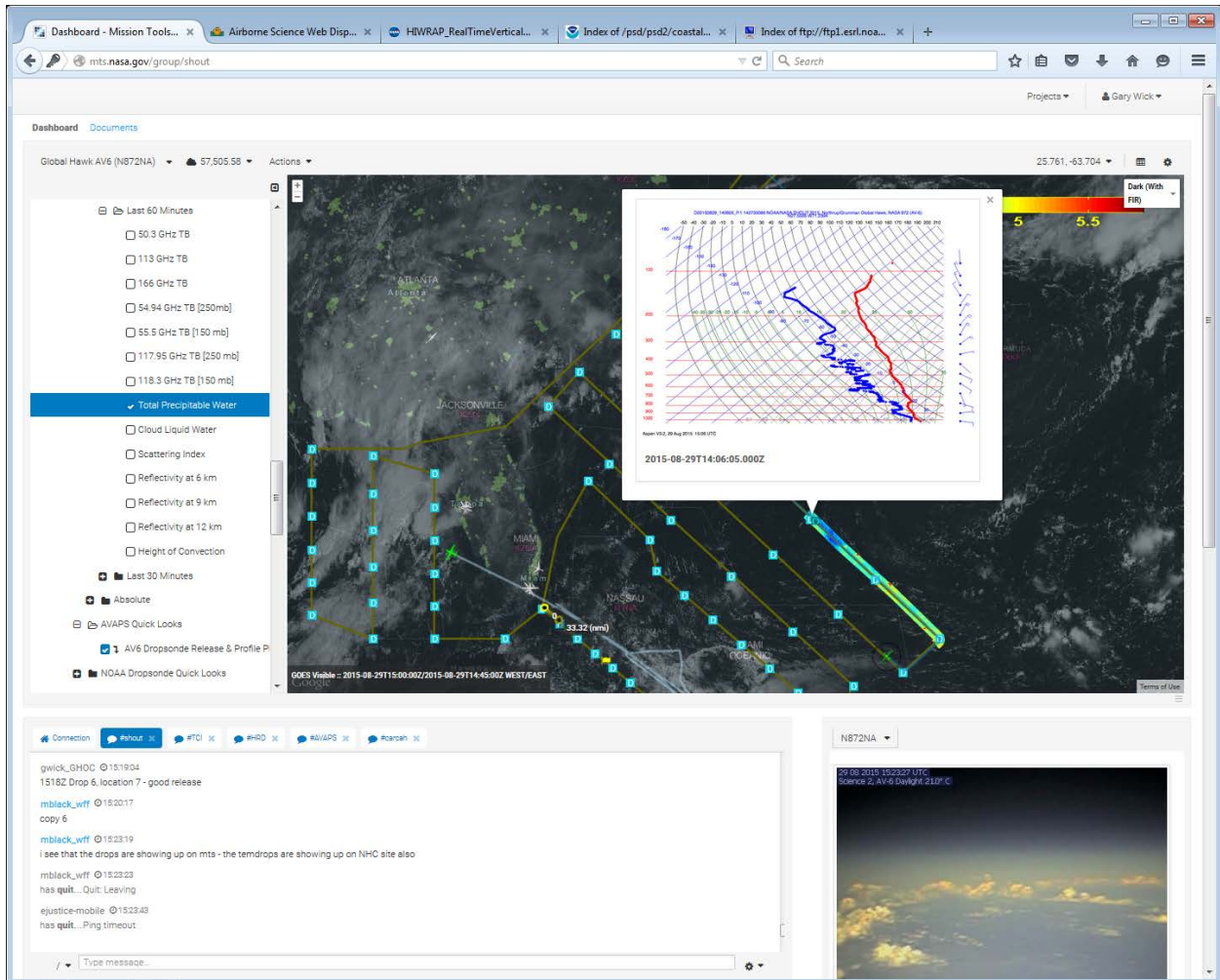
1503Z Drop 5, location 6 - good release



Aspen V3.2, 29 Aug 2015 15:40 UTC

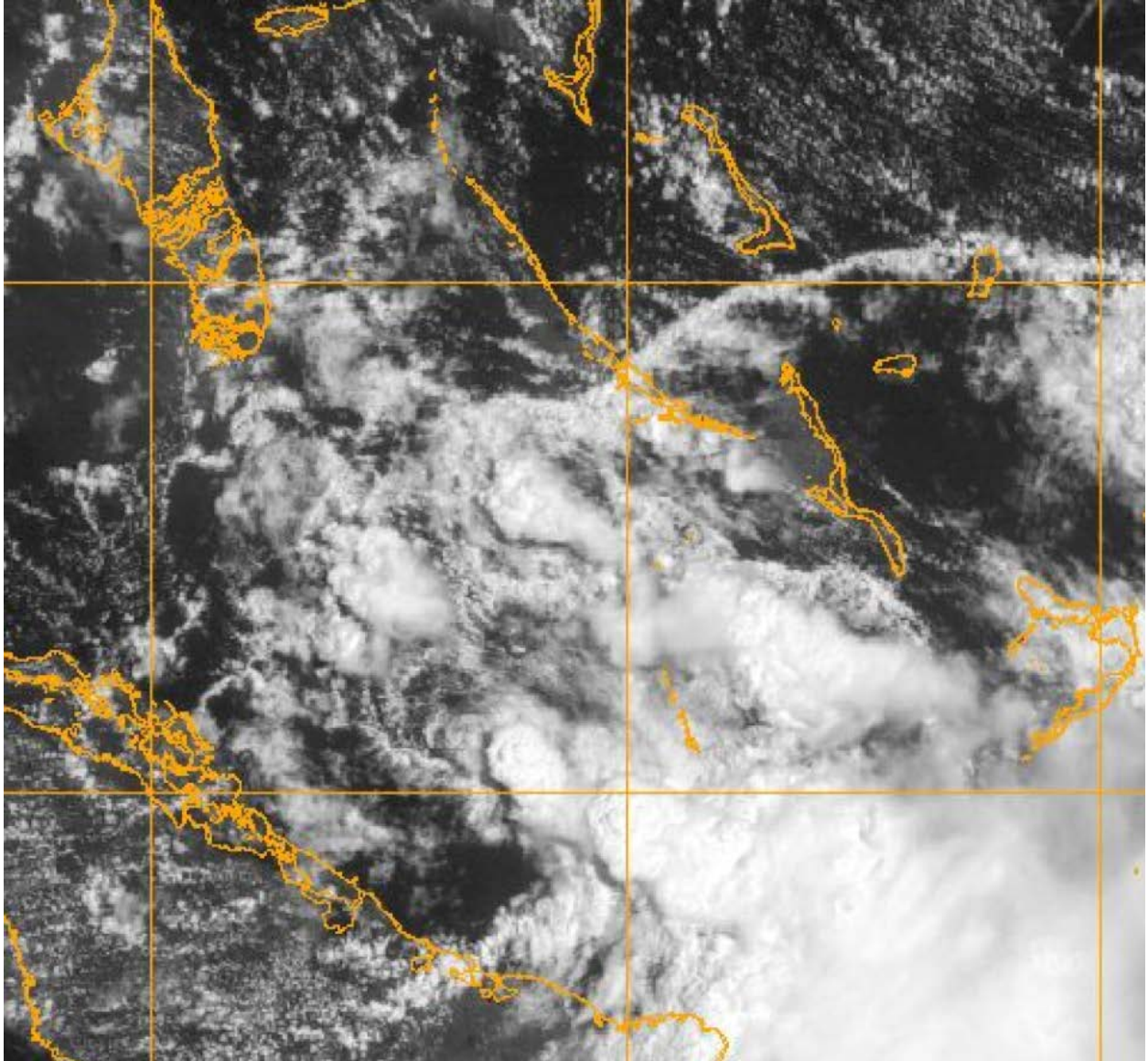
1510Z Tom came back and asked if we were willing to shift the southern most drops in the GoM further north to stay off of the Cuban FIR boundary. Jason asked and we do have permission to extend further West. As part of change we will drop the westernmost drops on lawnmower legs 2 and 3 to save time (and since likely wouldn't be able to drop in presence of air traffic).

Michael Black working sonde data and appearing in MTS

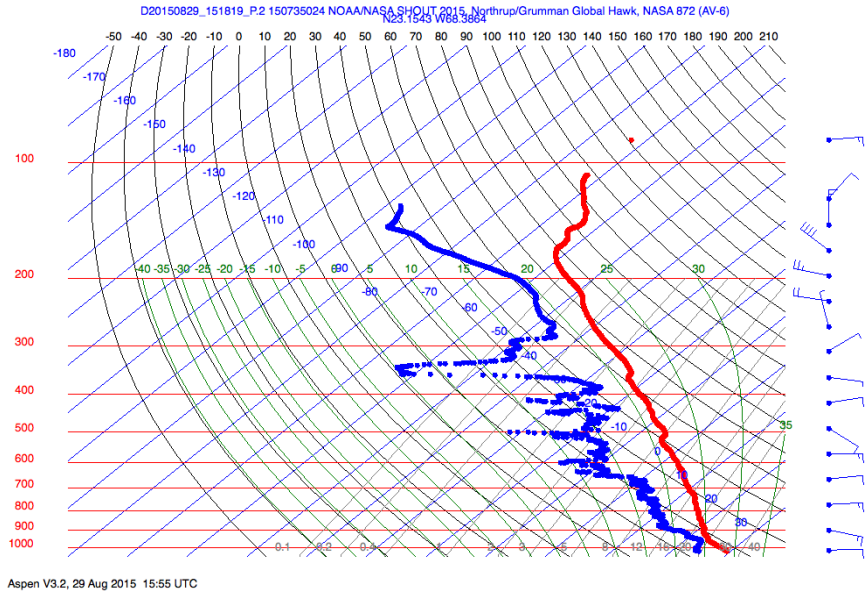


1514Z Loaded next sonde

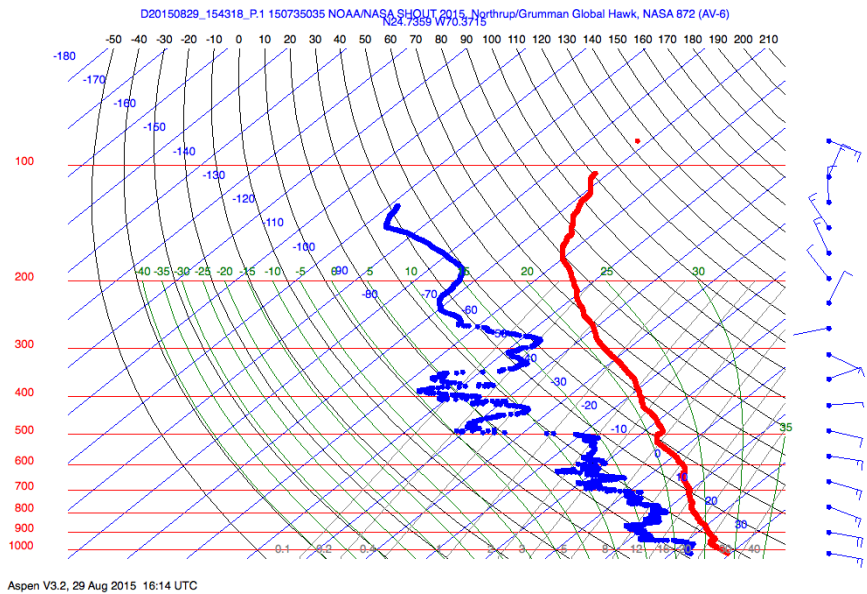
1515Z From Jim Moore in e-mail - hi res image



1518Z Drop 6 at location 7 - good release

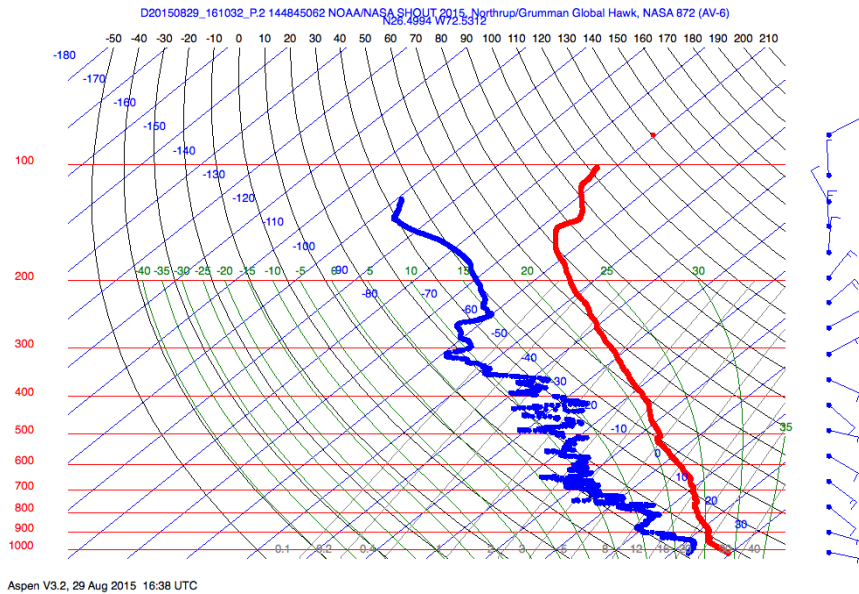


1543Z Drop 7 at location 8 - good release (skew-T below)

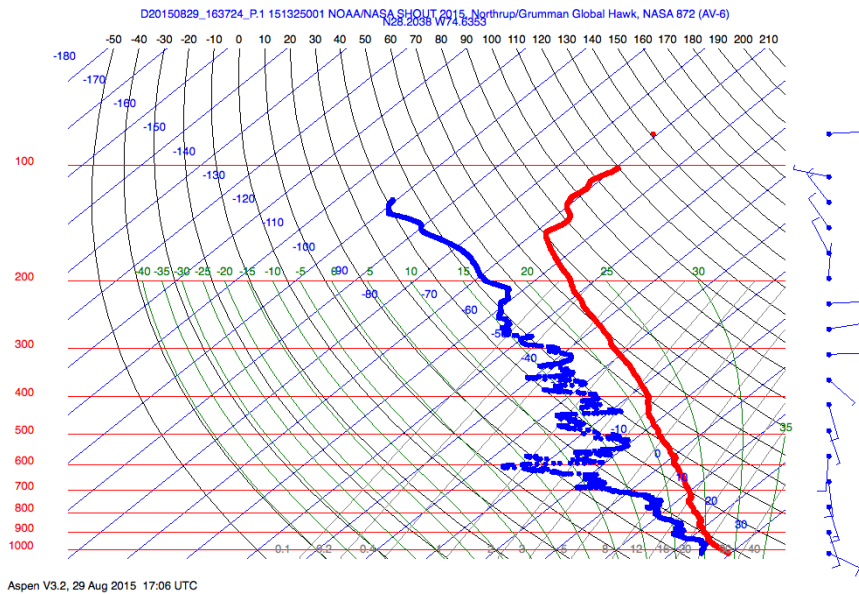


1606Z Sonde loaded

1610Z Drop 8 at location 9 - good release



1637Z Drop 9 at location 10 - good release



1651Z Mission reports will need to skip next two drops (11 and 12) due to air traffic. Had already shortened the legs to not go further in towards the coast. Delay will be on order 50 minutes

Looking ahead: Current convection is aligned very well along our proposed racetrack. Cloud tops and lightning are such that we would be pushing limits. With lost link situation, can't get trapped behind.

Dashboard - Mission Tools... | Airborne Science Web Disp... | HWRAP_RealTimeVertical... | Index of /psd/psd2/coastal... | Index of ftp://ftp1.sarl.noaa...

Global Hawk AV9 (N872NA) | 30,040.55 | Actions

- Global Hawk (NAS4872) Plan 1
- Global Hawk (NAS4872) Plan 2**
- WP-30 (N04442) Plan 1
- WP-30 (N04442) Plan 2
- WP-30 (N04443) Plan 1
- WP-30 (N04443) Plan 2
- Q-IV (N04448) Plan 1
- Q-IV (N04448) Plan 2
- WB-S7 (NAS4928) Plan 1
- WB-S7 (NAS4928) Plan 2
- TCl WB-S7 (1)
- TCl WB-S7 (2)
- Pilot Situational Awareness
- Tropical Overheating Tools
- Full Basin Cloud Top Height (Pressure Alt)
- CTH/TOT/Lighting**
- CTH/Lighting
- Lightning Last 10 min (Flashes)
- OUR TCl Products
- Administrative Boundaries

Cloud Height in Pressure Altitude Coordinates (kft)

22 363 -77 235

Dark Web Plan

- 1.3°C < 10T -Annual 14
- 1.5°C < 10T -Annual 14
- 1.7°C < 10T -Annual 14
- 1.9°C < 10T -Annual 14
- 2.1°C < 10T -Annual 14
- 2.3°C < 10T -Annual 14
- 10T -Annual temp < -1.3°C
- 10T -Annual temp < -1.5°C
- 10T -Annual temp < -1.7°C
- 10T -Annual temp < -1.9°C
- 10T -Annual temp < -2.1°C
- 10T -Annual temp < -2.3°C
- 10T -Annual temp < -2.5°C

GOES Visible - 2015-08-29T16:42:00Z 2015-08-29T16:20:00Z WEST/EAST

Connection | #N872NA | #TCl | #WB-S7 | #WP-30 | #Q-IV | #WB-S7 | #OUR TCl | #M04442

18:52:53
has joined the conversation.

18:53:00
cool hope the drops behave for you

18:53:14
has quit - Quit: Client has disconnected.

18:53:24
great - let me know and I'll send you the split file

18:53:32
has joined the conversation.

Type message

N872NA

DavLight

Dashboard - Mission Tools... | Airborne Science Web Disp... | HWRAP_RealTimeVertical... | Index of /psd/psd2/coastal... | Index of ftp://ftp1.sarl.noaa...

Global Hawk AV9 (N872NA) | 30,703.14 | Actions

- Global Hawk (NAS4872) Plan 1
- Global Hawk (NAS4872) Plan 2**
- WP-30 (N04442) Plan 1
- WP-30 (N04442) Plan 2
- WP-30 (N04443) Plan 1
- WP-30 (N04443) Plan 2
- Q-IV (N04448) Plan 1
- Q-IV (N04448) Plan 2
- WB-S7 (NAS4928) Plan 1
- WB-S7 (NAS4928) Plan 2
- TCl WB-S7 (1)
- TCl WB-S7 (2)
- Pilot Situational Awareness
- Tropical Overheating Tools
- Full Basin Cloud Top Height (Pressure Alt)
- CTH/TOT/Lighting**
- CTH/Lighting
- Lightning Last 10 min (Flashes)
- OUR TCl Products
- Administrative Boundaries

Cloud Height in Pressure Altitude Coordinates (kft)

22 066 -77 367

Dark Web Plan

- 1.3°C < 10T -Annual 14
- 1.5°C < 10T -Annual 14
- 1.7°C < 10T -Annual 14
- 1.9°C < 10T -Annual 14
- 2.1°C < 10T -Annual 14
- 2.3°C < 10T -Annual 14
- 10T -Annual temp < -1.3°C
- 10T -Annual temp < -1.5°C
- 10T -Annual temp < -1.7°C
- 10T -Annual temp < -1.9°C
- 10T -Annual temp < -2.1°C
- 10T -Annual temp < -2.3°C
- 10T -Annual temp < -2.5°C

GOES Visible - 2015-08-29T16:52:00Z 2015-08-29T16:40:00Z WEST/EAST

Connection | #N872NA | #TCl | #WB-S7 | #WP-30 | #Q-IV | #WB-S7 | #OUR TCl | #M04442

18:52:53
has joined the conversation.

18:53:00
cool hope the drops behave for you

18:53:14
has quit - Quit: Client has disconnected.

18:53:24
great - let me know and I'll send you the split file

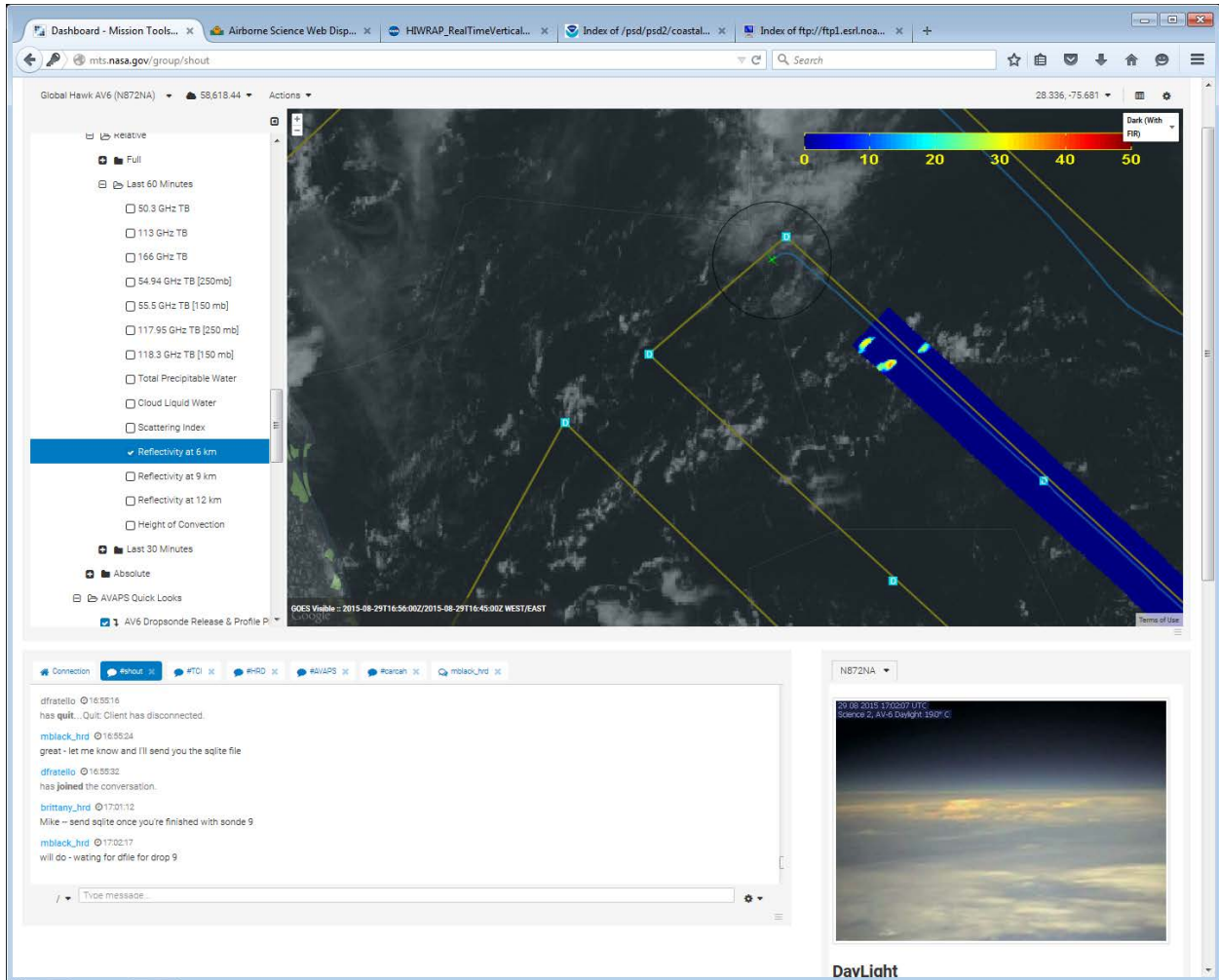
18:53:32
has joined the conversation.

Type message

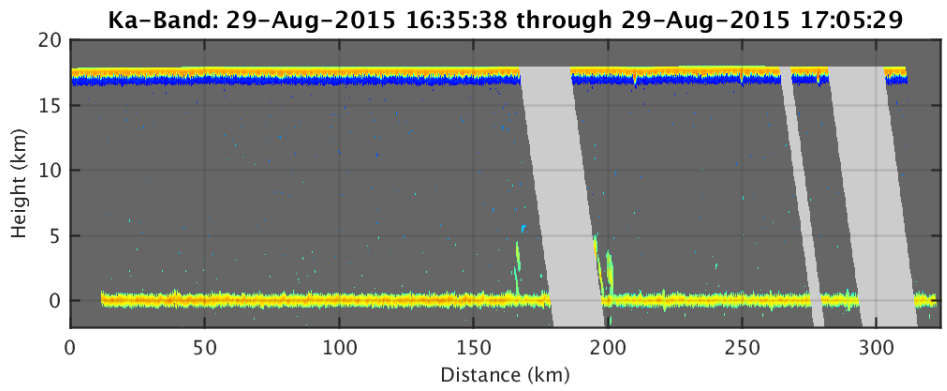
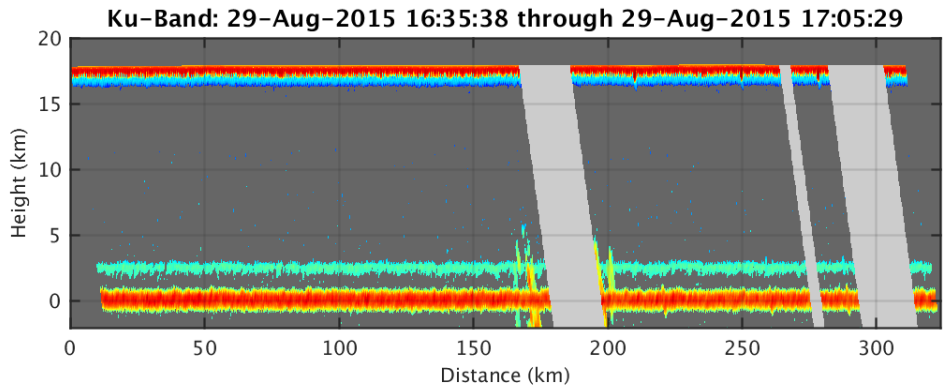
N872NA

DavLight

1704Z HAMSRS reports seeing a few precipitating clouds just behind. Below is their reflectivity at 6 km:

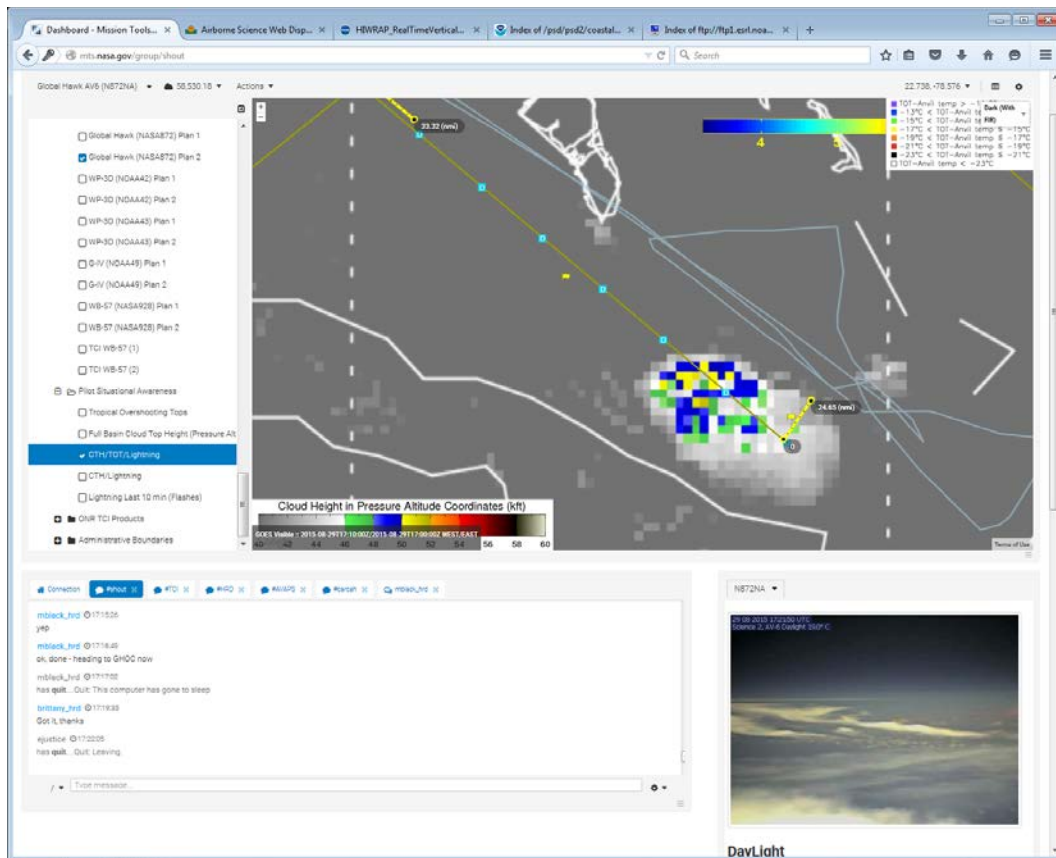


HIWRAP showed just small echoes:



LIP reports that they saw electric fields and perhaps just a bit of lightning in those targets

1722Z Convection already appearing less active (below image)



1737 - M. Black taking over G. Wick - skipped two drops due to air traffic

Start of second shift: Michael Black, Natalie Laudier, and Pete Black

Dashboard - Mission Tools... Airborne Science Web Disp... HWRAP_RealTimeVertical... Index of /psd/psd2/coastal... Index of /ftp://ftp1.csl.noaa...

Dashboard Documents

Global Hawk AVIS (N872NA) 2015-08-29T17:36:47Z (About 28 seconds ago) Actions

24.725, -89.676

- Global Hawk (N872NA) Plan 1
- Global Hawk (N872NA) Plan 2**
- WP-30 (N04A42) Plan 1
- WP-30 (N04A42) Plan 2
- WP-30 (N04A43) Plan 1
- WP-30 (N04A43) Plan 2
- G-IV (N04A44) Plan 1
- G-IV (N04A44) Plan 2
- WB-57 (N58A28) Plan 1
- WB-57 (N58A28) Plan 2
- TCI WB-57 (1)
- TCI WB-57 (2)
- Pilot Situational Awareness
- Tactical Overlay/Tracking Tools

2015-08-29T17:22:00Z/2015-08-29T17:22:00Z WEST/RAST

Map from KML © Google, NOAA, Terra

Conversation

mblack @ 17:30:23 has joined the conversation.

brittany_jvd @ 17:30:44 has quit. Out: Client has disconnected.

brittany_jvd @ 17:30:48 has joined the conversation.

mblack_gnoc @ 17:30:23 5 minutes to next drop

ejjustice @ 17:36:43 has joined the conversation.

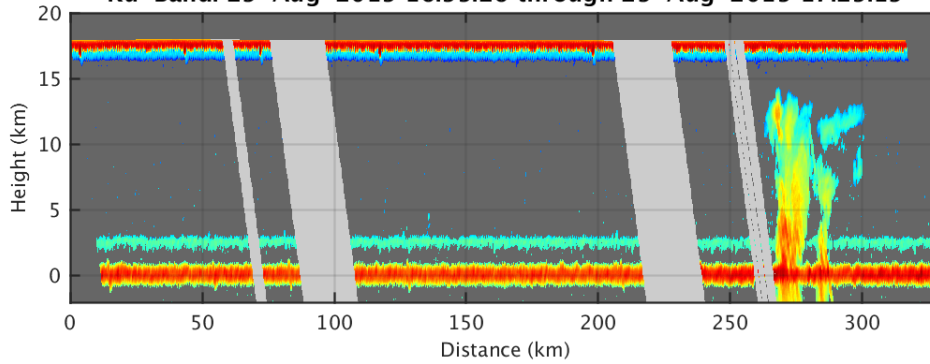
Type message

N872NA

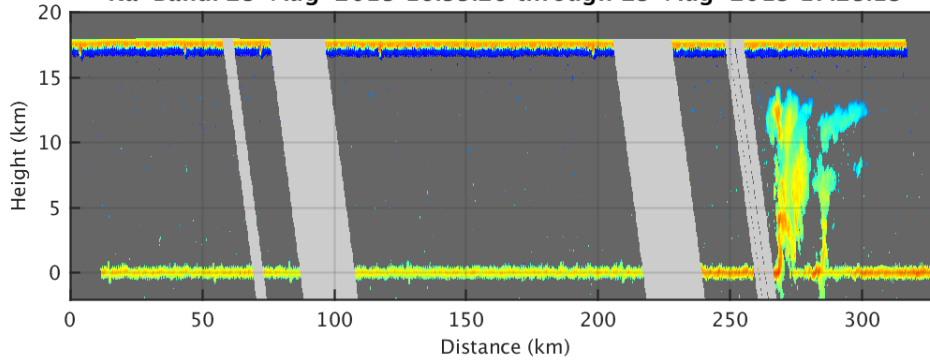
DayLight

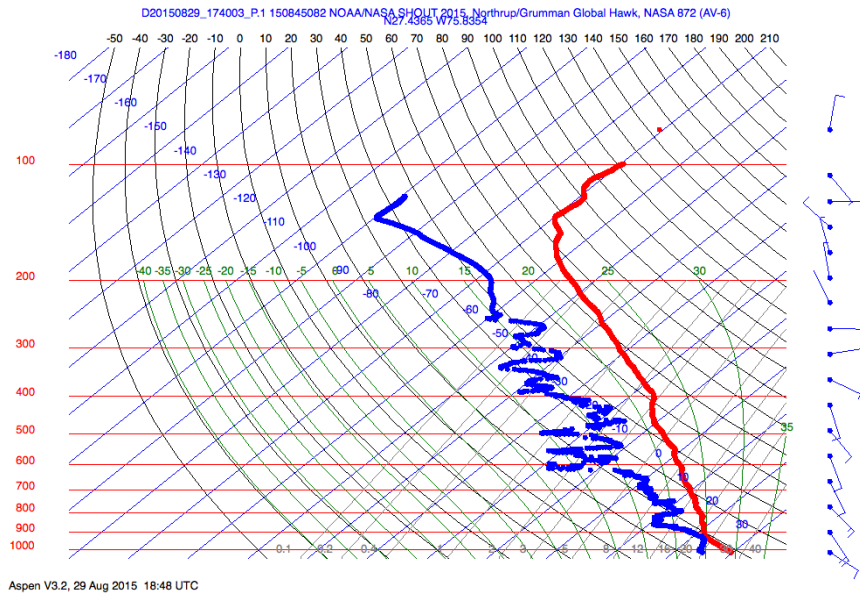
HDVIS HEADER DayLight TimeStamp 2015-08-29T17:36:58.000Z Latitude 117.887497684 Longitude Altitude 20740 Heading 239.7 Pitch 0.3 Roll 4

Ku-Band: 29-Aug-2015 16:55:26 through 29-Aug-2015 17:25:19



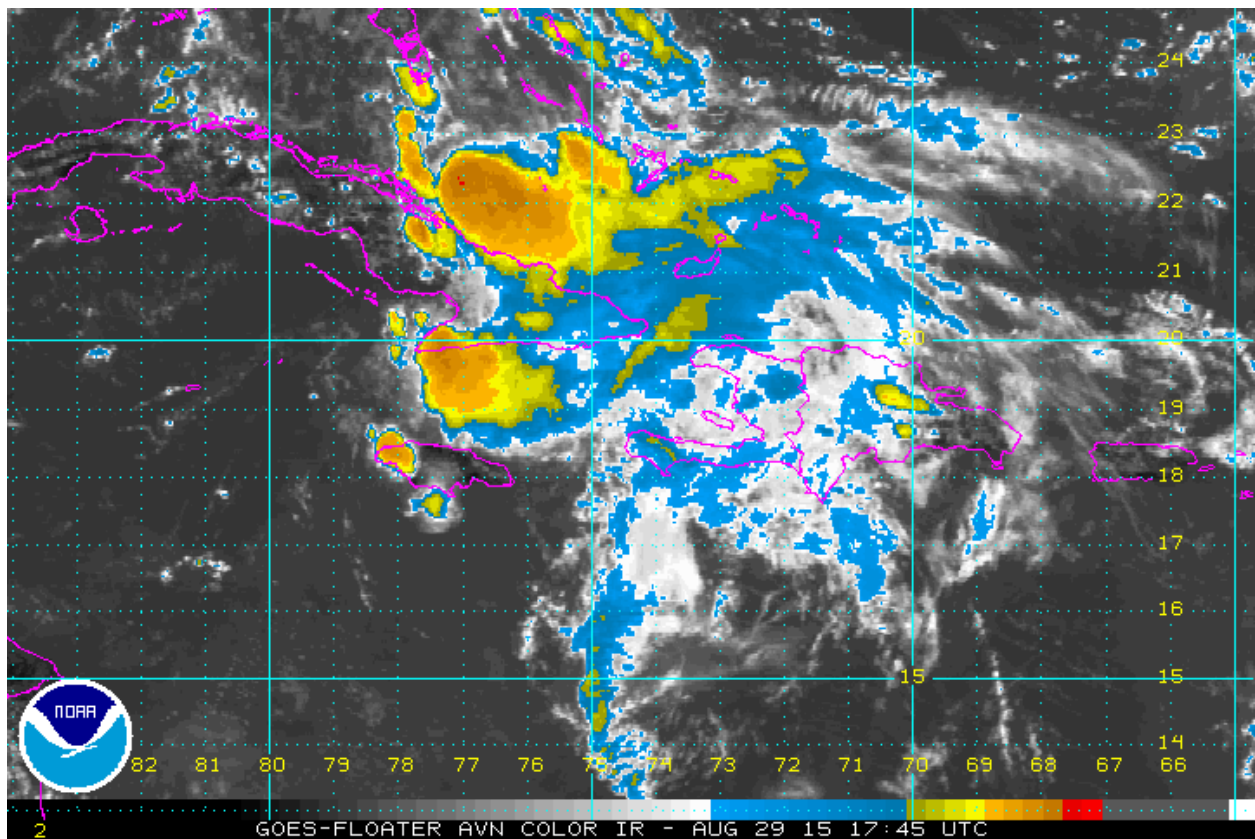
Ka-Band: 29-Aug-2015 16:55:26 through 29-Aug-2015 17:25:19

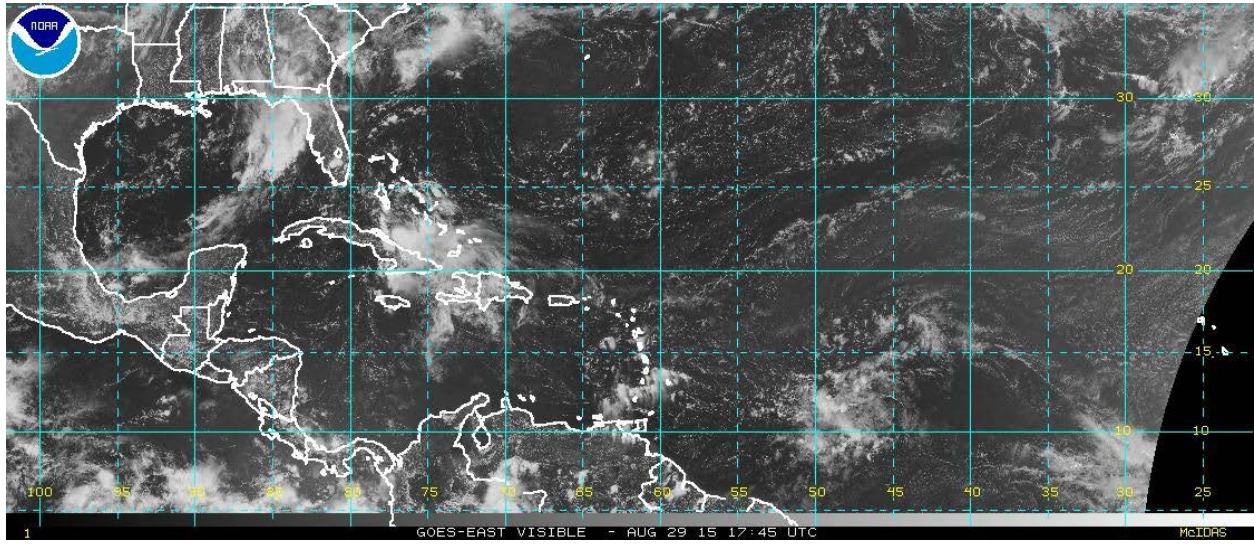




1740z drop 10 at location 13

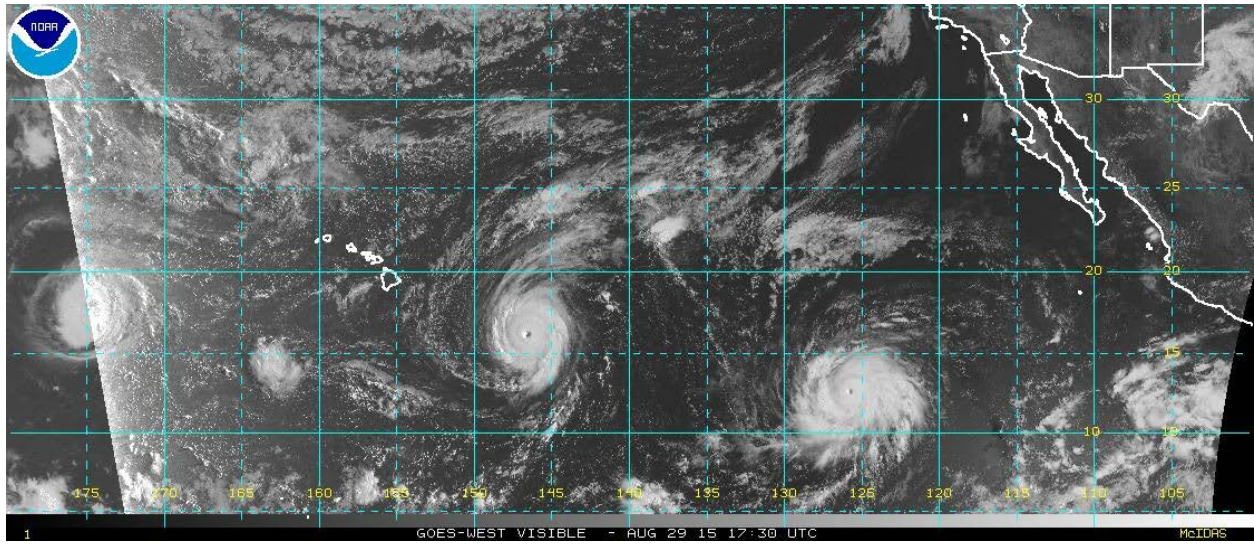
1805z drop 11 at location 14

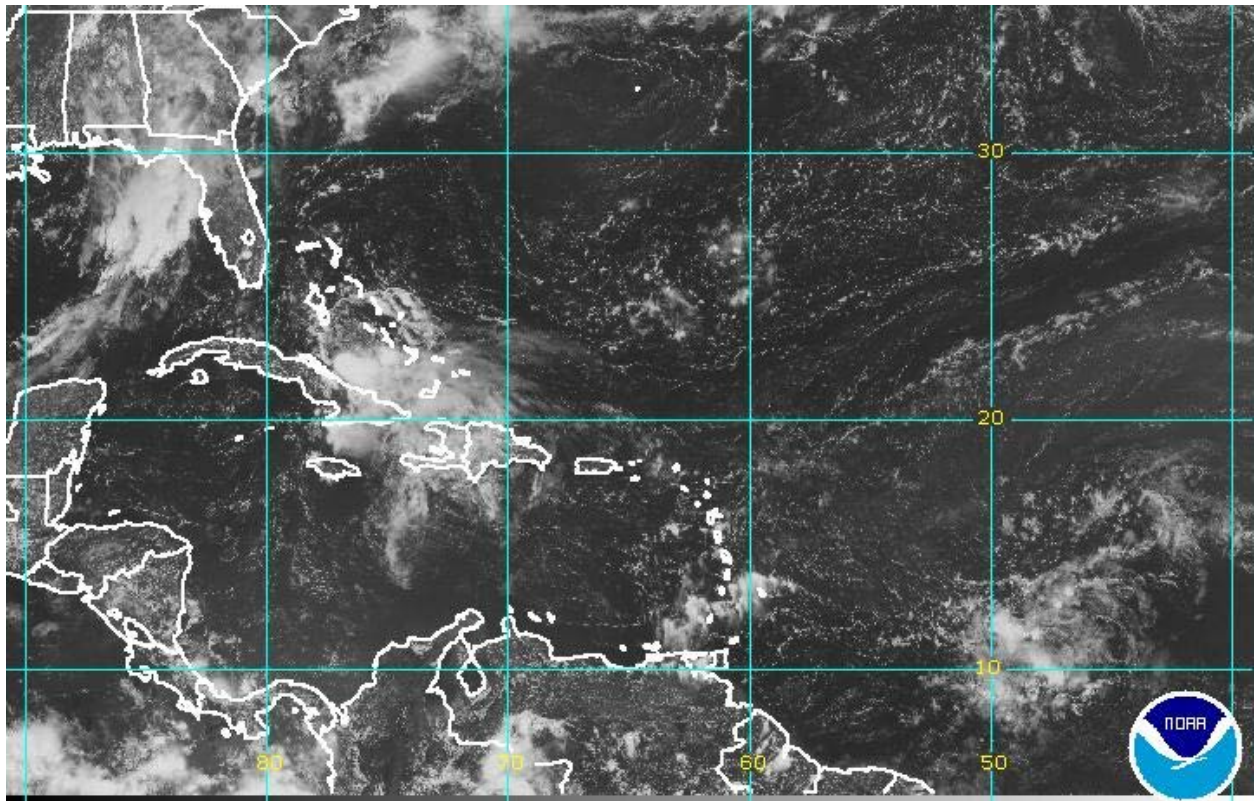




Above is what we are flying ... and ...

Below is what we could have been flying: coulda, woulda, shoulda!

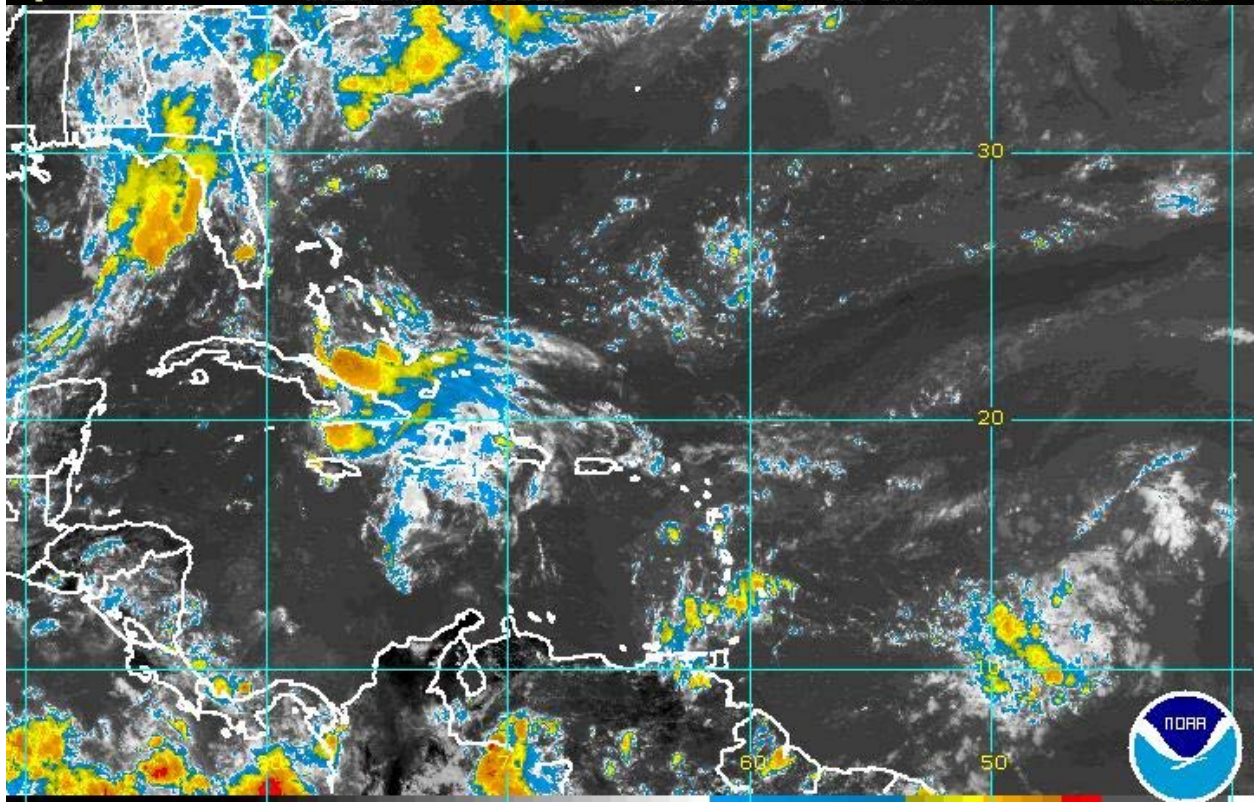




1

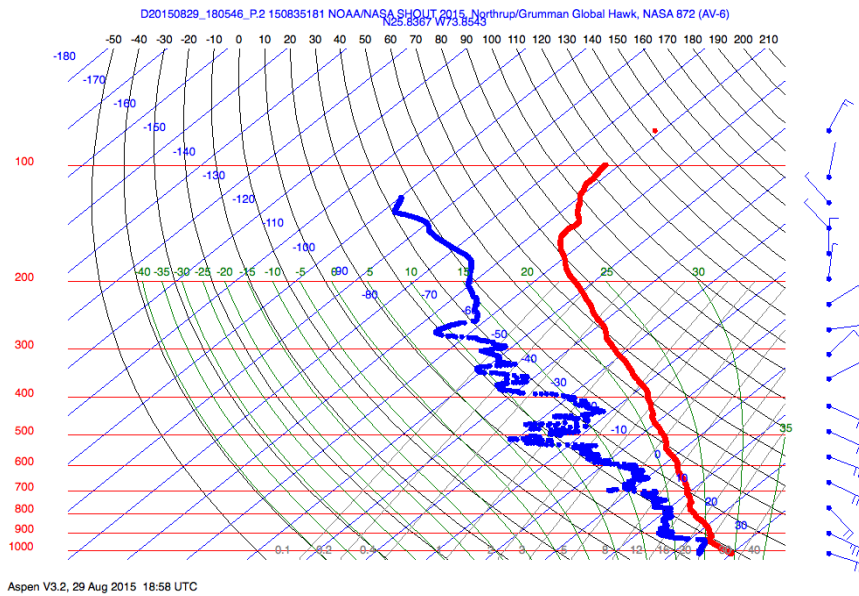
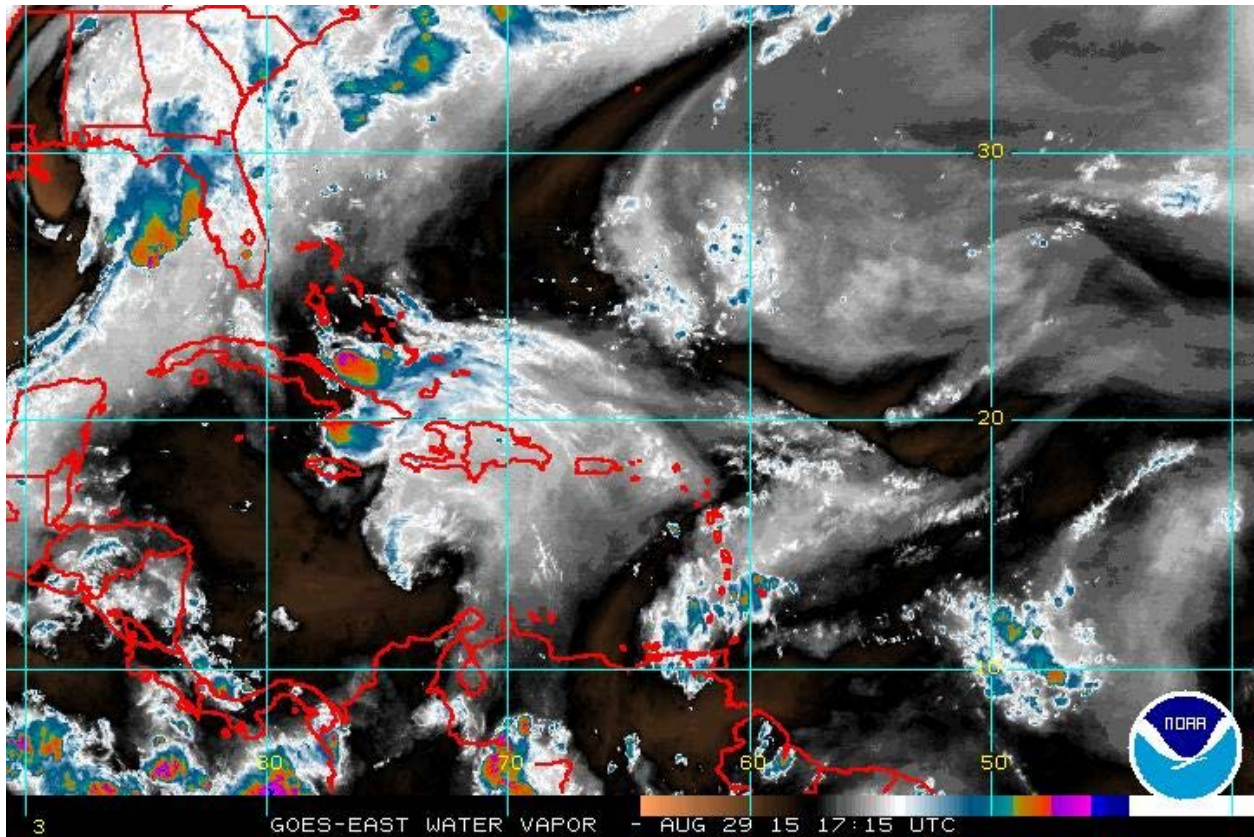
GOES-EAST VISIBLE - AUG 29 15 17:15 UTC

McIDAS

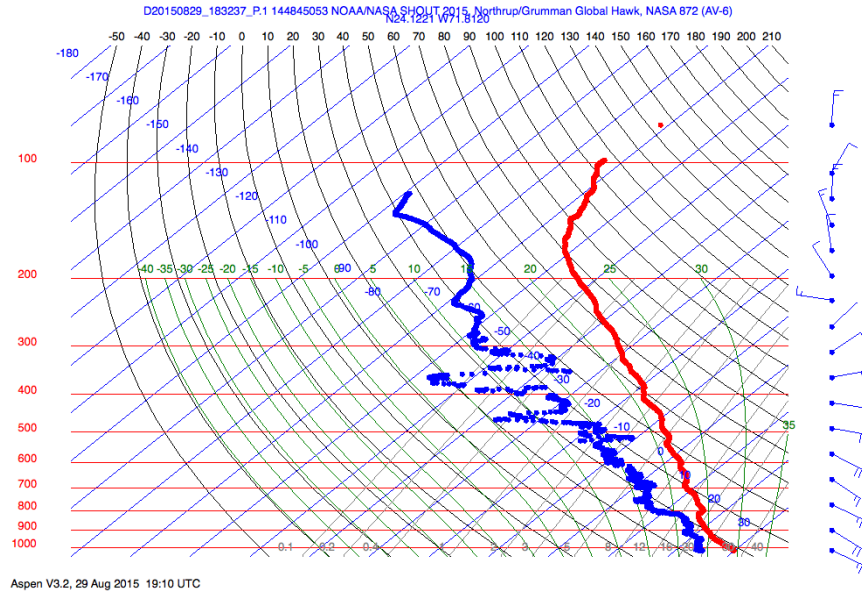


4

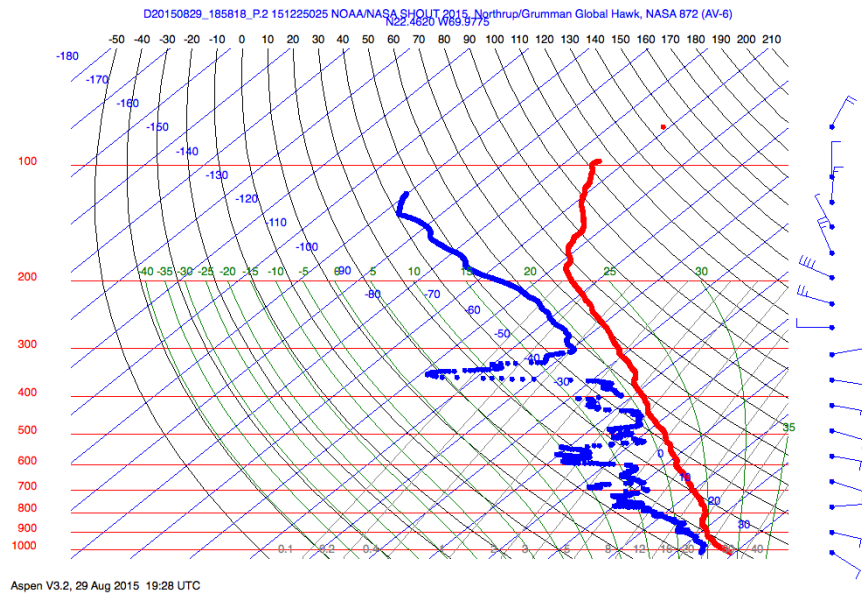
GOES-EAST AVNCOLOR IR CH. 4 - AUG 29 15 17:45 UTC



drop 11 1805z loc 14 (above)



drop 12 1832z loc 15



drop 13 1858z loc 16

Dashboard - Mission... X Airborne Science We... X HWRAP_RealTimeV... X 020150829_161032_P... X Index of files/ftp1.es... X Dry Tortugas Nation... X vis-Lpgg OPEG Imag... X

int.nasa.gov/group/flight

Dashboard Documents

Global Hawk AVIS (N872NA) 2015-08-29T18:55:53Z (About 28 seconds ago) Actions

- Global Hawk (NAS857) Plan 1
- WP-30 (N0AA42) Plan 1
- WP-30 (N0AA42) Plan 2
- WP-30 (N0AA43) Plan 1
- WP-30 (N0AA43) Plan 2
- G-IV (N0AA44) Plan 1
- G-IV (N0AA44) Plan 2
- WB-57 (NAS828) Plan 1
- WB-57 (NAS828) Plan 2
- TCI WB-57 (1)
- TCI WB-57 (2)
- Pilot Situational Awareness
 - Tropical Overshooting Tops
 - Full Basin Cloud Top Height (Pressure Alt)
 - CTH/TOT/Lighting
 - CTH/Lighting

31 785, 68 143

TOI-Anvil temp. > -1°C
 TOI-Anvil temp. < -1°C
 TOI-Anvil temp. < -15°C
 TOI-Anvil temp. < -15°C
 TOI-Anvil temp. < -15°C
 TOI-Anvil temp. < -15°C
 TOI-Anvil temp. < -15°C
 TOI-Anvil temp. < -23°C

Connection: #Inuit, #IG, #Iran

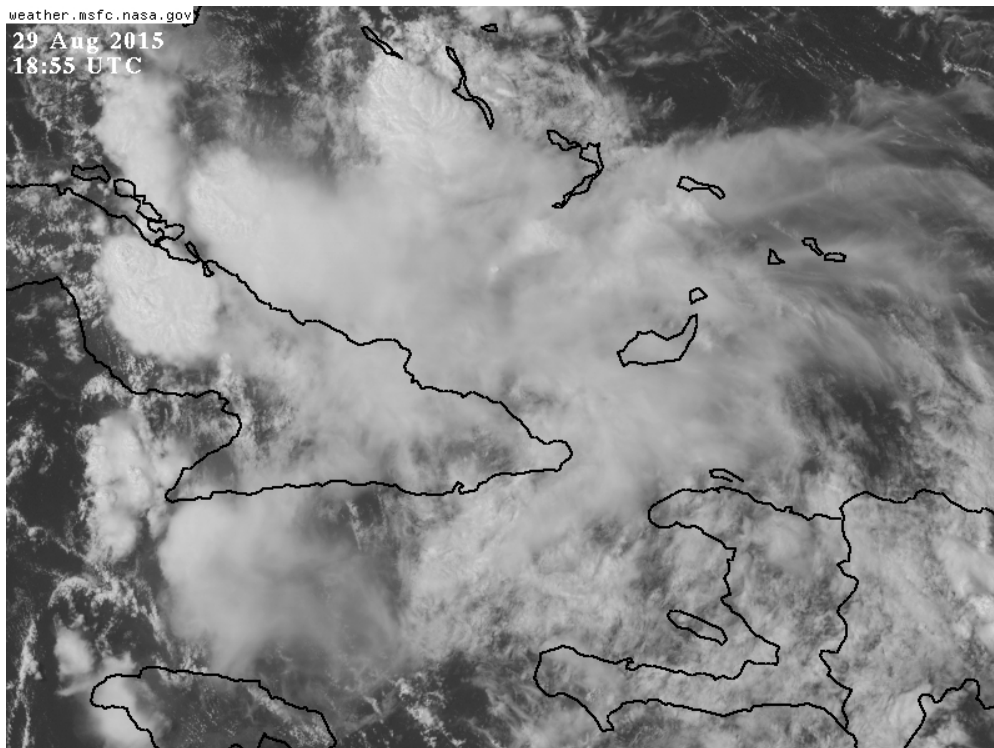
strowen @ 18:02:08 has joined the conversation.
 strowen @ 18:01:48 has quit. Quit: Client has disconnected.
 brianey_ay @ 18:01:42 drop 10 1740c sent to gts and earl
 miback_ghee @ 18:07:48 drop 14 1804c file available
 miback_ghee @ 18:39:20 drop 13 loc 18 1858z

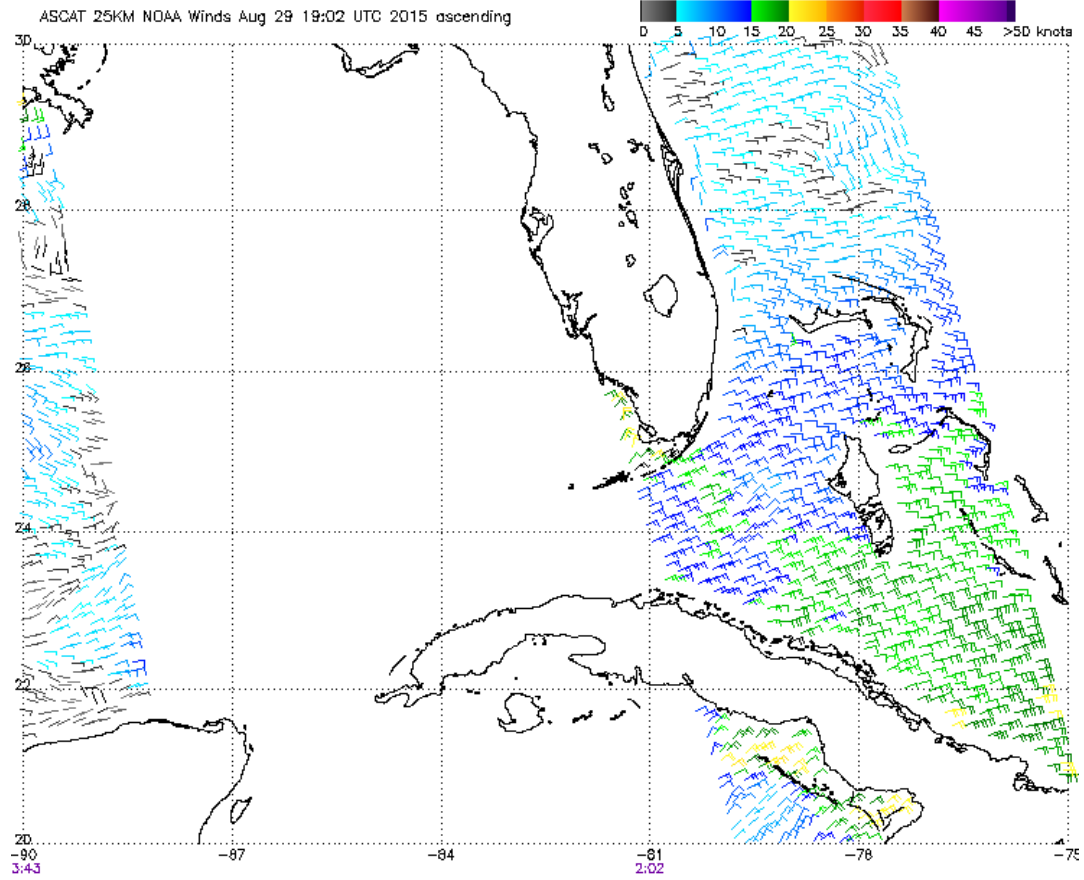
Type message

N872NA

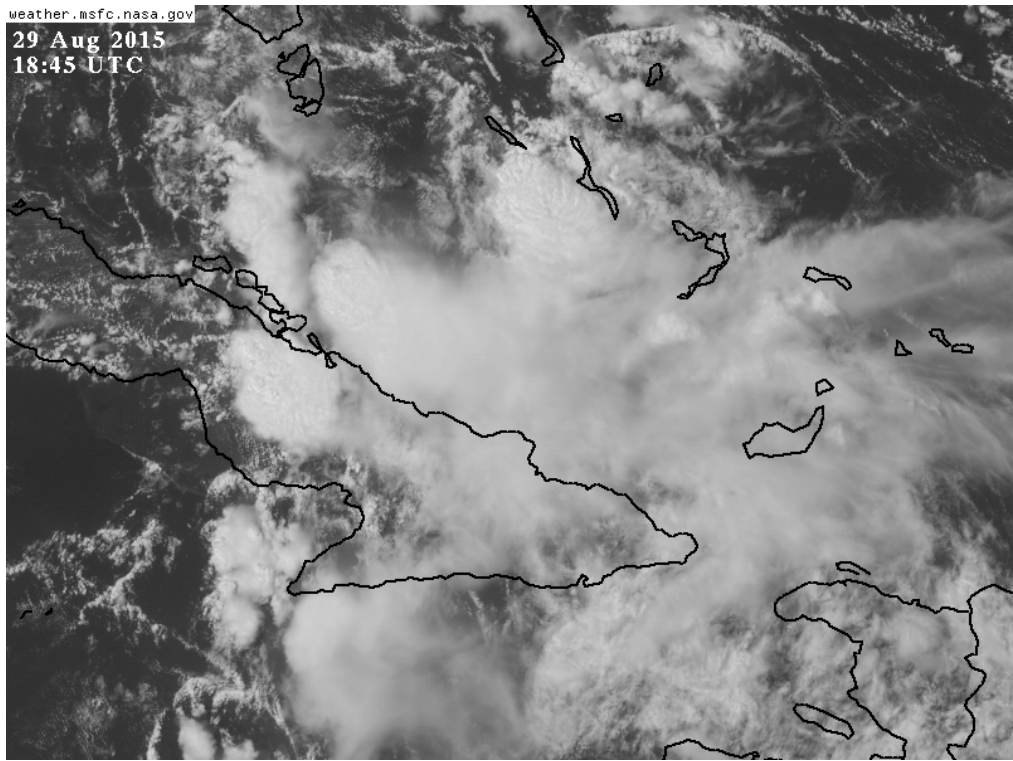
DayLight

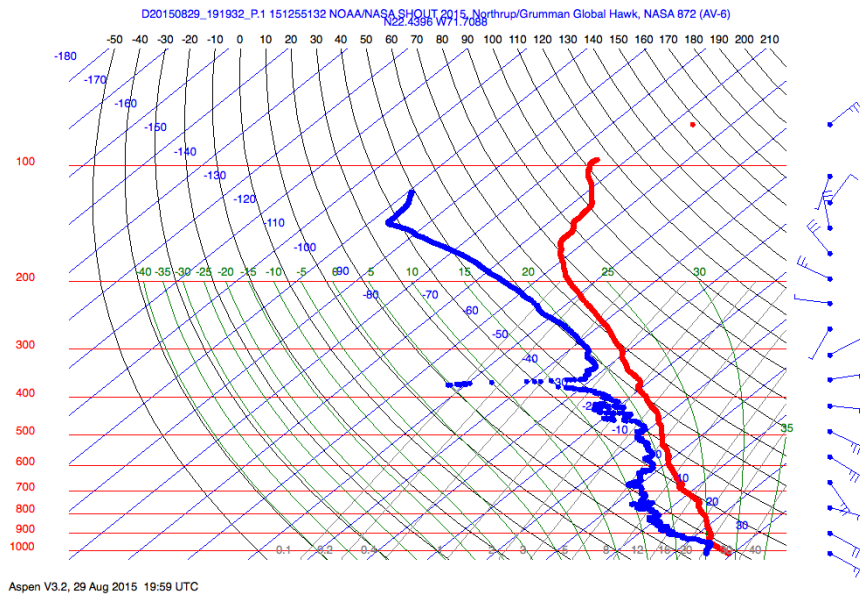
1858z - Jason Updated flight plan for extra N-S leg in Gulf





Note: 1) Times are GMT 2) Times along bottom correspond to measurement at 25N
 3) Data buffer is 22 hrs from Aug 29 19:02 UTC 2015 4) Black wind bars indicate possible contamination
 NOAA/NESDIS/Center for Satellite Applications and Research

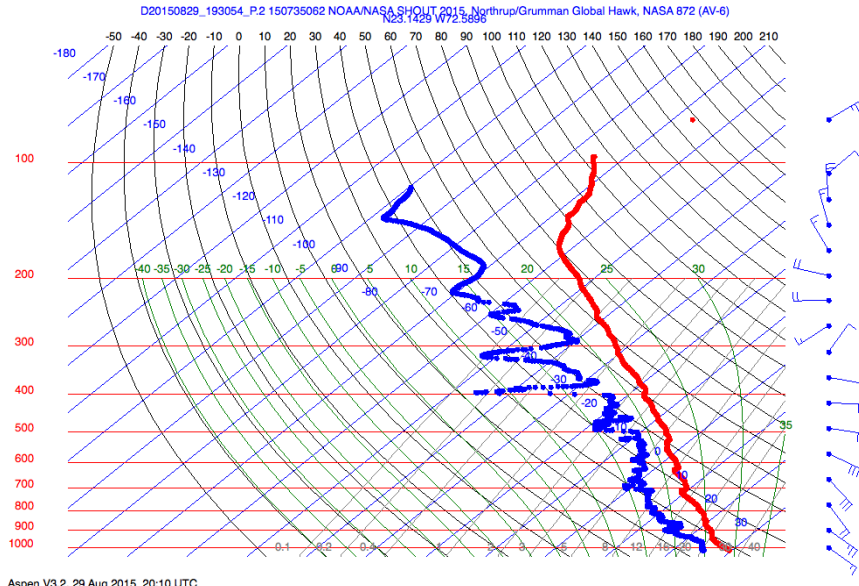




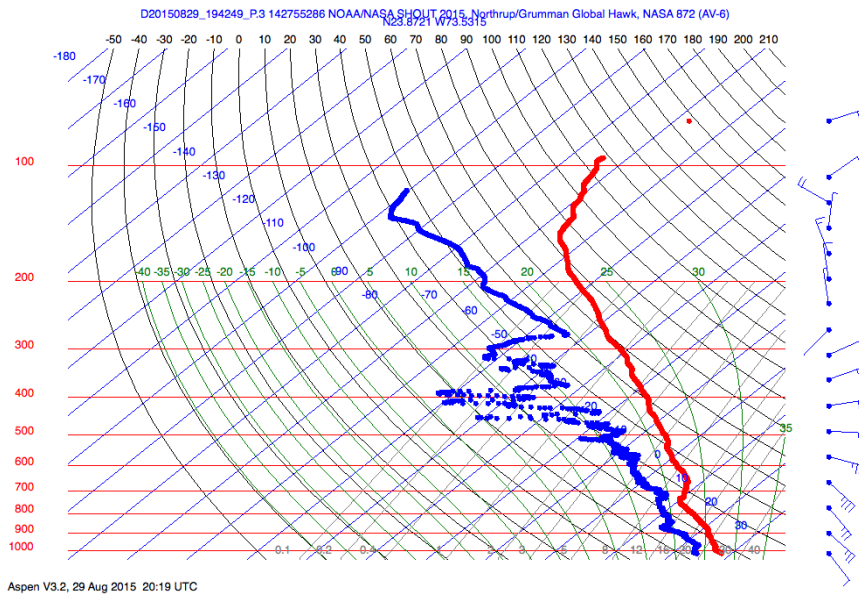
Drop 14 Loc 17 1919z

29 08 2015 19:31:54 UTC
 Science 2, AV-6 Daylight 18.5° C





Drop 15 loc 18 1930z



Drop 16 loc 19 1943z

29 08 2015 20:22:18 UTC
Science 2, AV-6 Daylight 19.0° C



29 08 2015 20:26:36 UTC
Science 2, AV-6 Daylight 19.0° C



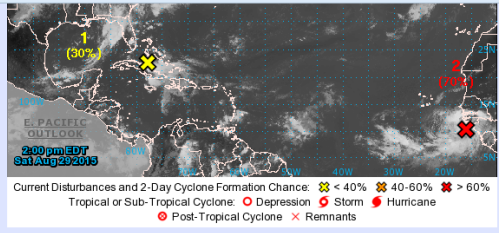
The screenshot displays a NASA web application interface. At the top, there are browser tabs and a search bar. The main content area features a satellite map of the Caribbean and surrounding regions, with a yellow flight path overlaid. A legend on the left side of the map lists various data channels, with '50.3 GHz TB' selected. Below the map is a chat window showing a list of users who have joined the conversation, including 'ksellwood', 'doyglaki', 'mblack_ghoc', 'brittany_hrd', and 'dodie'. To the right of the chat is a 'DayLight' section with a video player showing a view from space, likely from the International Space Station, with technical data displayed below it.

Drop 20 Loc 23 2027z

18	15	1930	15	1016	xx/xx	y	y	Removed lowermost winds
19	16	1943	16	1016	140/14	y	y	good drop
20	17	1954	17	1016	130/20	y	y	good drop
21	18	2005	18	1016	120/21	y	y	good drop
22	19	2018	19	1016	130/20	y	y	good drop
23	20	2026	20	1015	xx/xx	y	y	Removed lowermost winds
24	21	2054	21	1015	120/10	y	y	good drop

Dashboard - Mis... av6daylight2015... Airborne Scienc... HIWRAP_ReaTi... Index of /psd/ps... Index of ftp://ftp... Ocean Coverage... Atlantic 2-Da... NASA/MSFC Int...

www.nhc.noaa.gov/gtvo.php?basin=atl&days=2



View 5-Day Graphical Tropical Weather Outlook

Current Disturbances and 2-Day Cyclone Formation Chance: ✪ < 40% ✪ 40-60% ✪ > 60%
○ Tropical or Sub-Tropical Cyclone ○ Depression ○ Storm ✪ Hurricane
○ Post-Tropical Cyclone ✪ Remnants

Tropical Weather Outlook Text Tropical Weather Discussion

ZCIC MIATWQAT ALL
TTRADQ RNNH DDDHMM

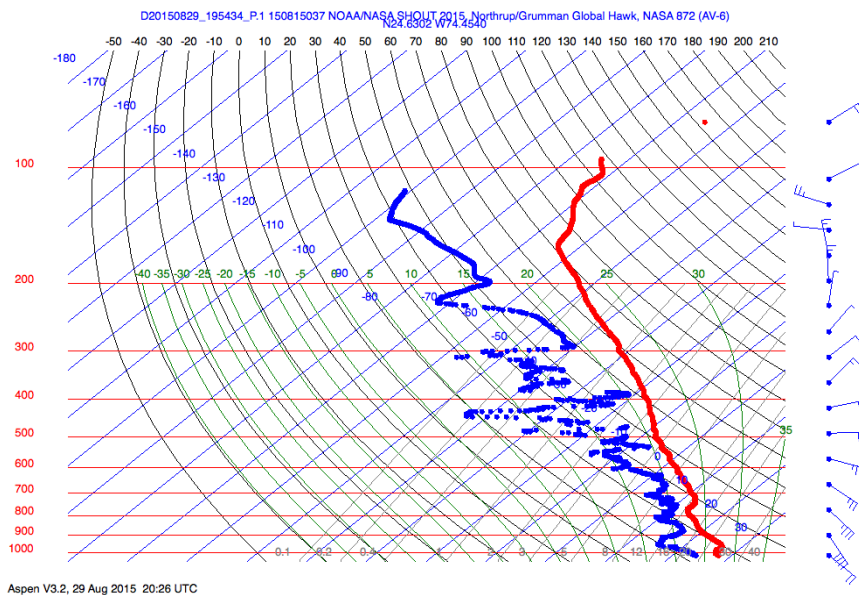
TROPICAL WEATHER OUTLOOK
NWS NATIONAL HURRICANE CENTER MIAMI FL
200 PM EDT SAT AUG 29 2015

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:

- The National Hurricane Center has issued the last advisory on Tropical Storm Erika. The remnants of Erika, a trough of low pressure, are currently located near central Cuba and the central Bahamas and moving west-northwestward at 20 to 25 mph. This system is producing disorganized thunderstorm activity, and recent satellite wind data indicate it is producing winds to tropical storm force. Upper-level winds are currently not favorable for re-development of the system into a tropical cyclone. However, conditions may become more conducive Sunday or Monday while it moves northwestward to northward over the eastern Gulf of Mexico. Regardless of re-development, the remnants of Erika are expected to spread locally heavy rains and gusty winds across portions of the Bahamas, central and eastern Cuba, and central and southern Florida during the next couple of days. Additional information on this system can be found in marine forecasts and local forecast products issued by the National Weather Service and the meteorological services of Cuba and the Bahamas.
 - * Formation chance through 48 hours...low...30 percent
 - * Formation chance through 5 days...medium...40 percent
- Shower and thunderstorm activity associated with a low pressure area located about 175 miles west of Conakry, Guinea, continue to become better organized. A tropical depression could form during the next day or so while the system moves northwestward and then west-northwestward toward the Cape Verde Islands at 10 to 15 mph. Interests in the Cape Verde Islands should monitor the progress of this system.
 - * Formation chance through 48 hours...high...70 percent
 - * Formation chance through 5 days...high...90 percent

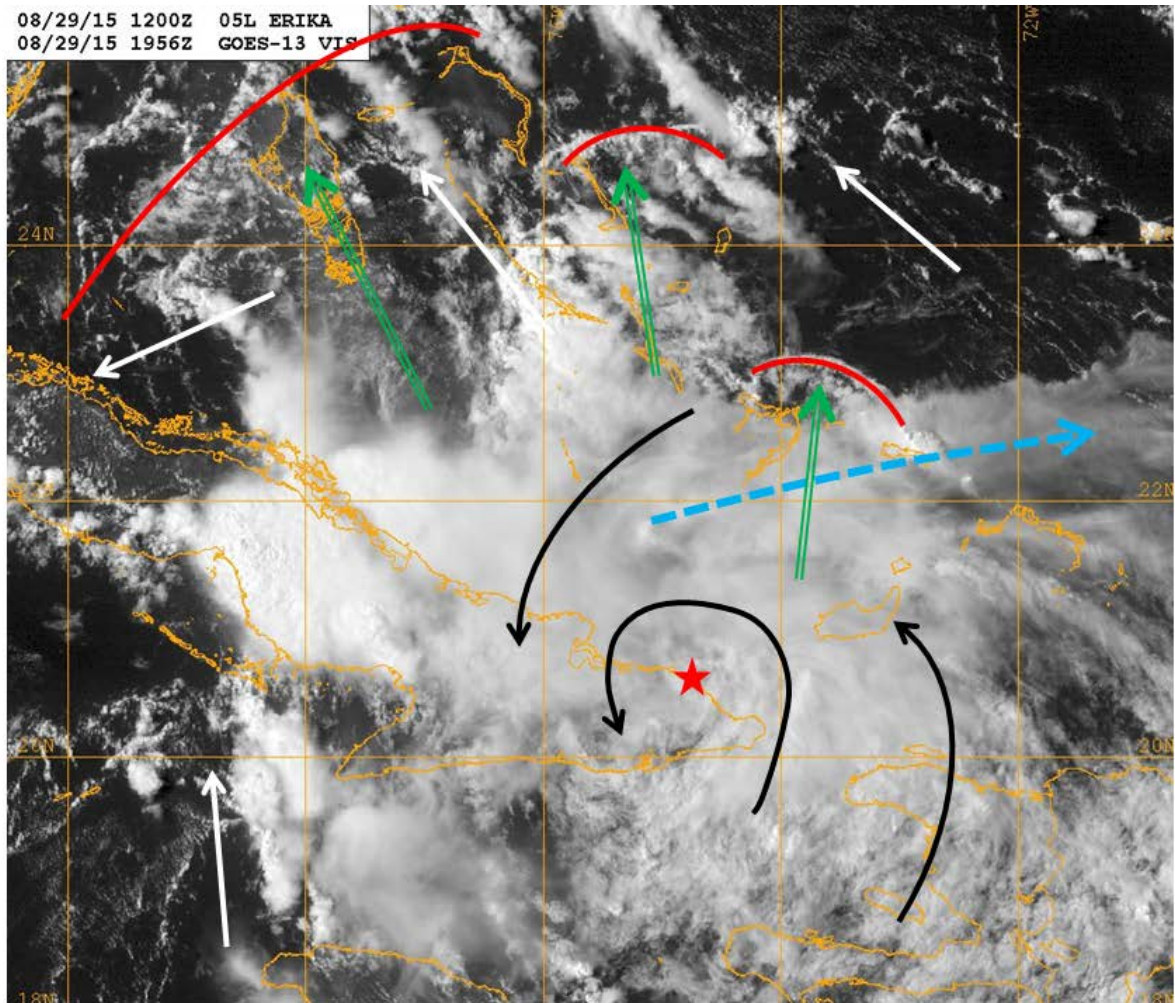
Forecaster Beven

Since 1870
National Weather Ser

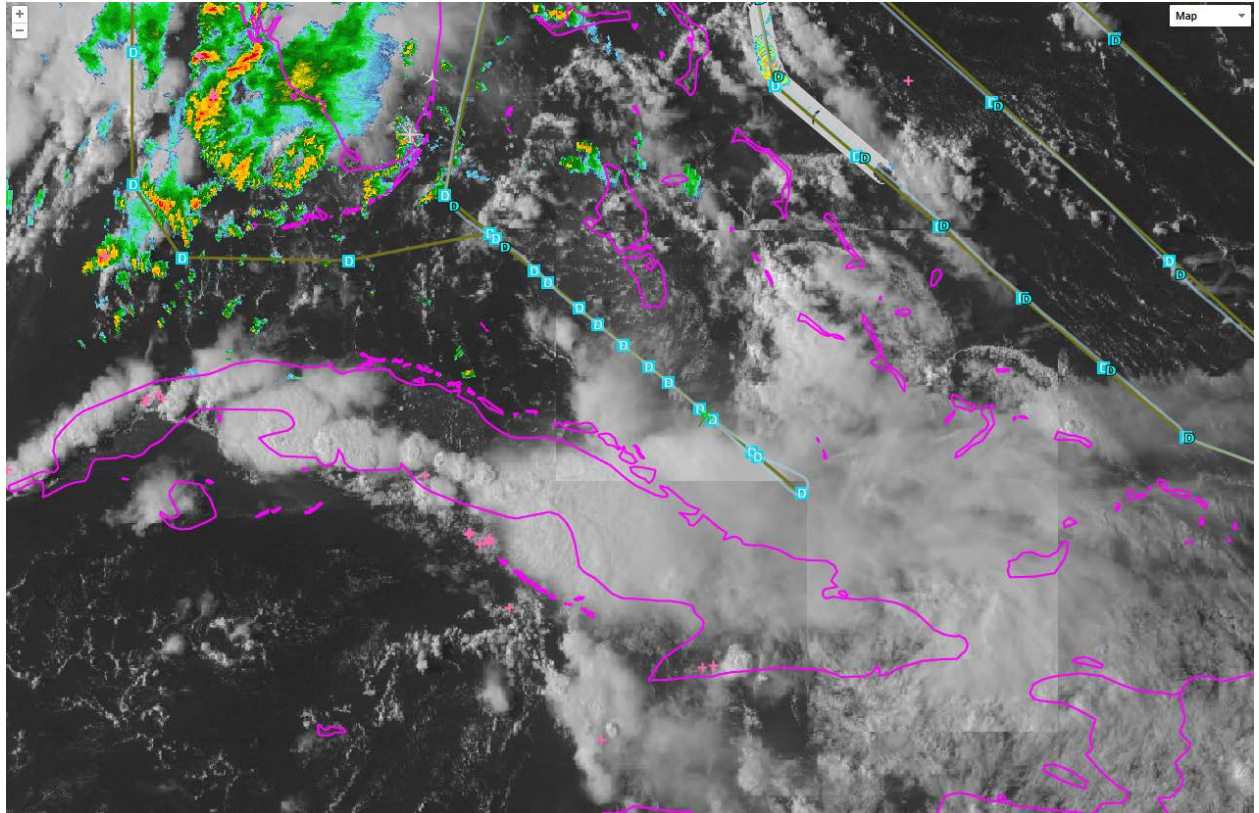


Drop 17 Loc 20 1954z

1956Z Schematic of flow circulation around mid-level vortex off Cuba SE coast. Gust fronts in red. Gust front motion in double green line. Low-level flow in white arrows. Mid-level flow around mid-level vortex in black. Low level vortex south of Andros on north coast of Cuba, fixed earlier by AF, nearly dissipated. red star indicated center of mid-level vortex. Dashed light blue line indicates outflow channel.



Mid-level vortex complex in MTS with GH flight track and sonde drop locations plus NWS radar:



Dashboard - ... x en/daylight2015... Airborne Scienc... HBWRAP_RealTI... Index of /pid/ps... Index of /ftp/ftp... Ocean Coverage... Atlantic 2-Day G... NASA/MSFC Int... +

mitl.nasa.gov/group/vhoad

Projects ▾ Michael Black ▾

Dashboard Documents

Global Hawk A19 (N872NA) ▾ 2015-08-23T20:03:52 (About 29 seconds ago) ▾ Actions ▾ 24 562 / 76 491

- View Status
- Operations & Planning
 - +
 - Add...
- Satellites
 - Add a Satellite
 - Set Observer Position
- Layers
 - +
 - Add...
- Bundles
 - binOUT Products
 - Aircraft Operations & Planning
 - Radar Products
 - Lightning Products
 - NAPLN/USPLN/GLN Lightning Last 60 m
 - NAPLN/USPLN/GLN Lightning Last 30 m
 - NAPLN/USPLN/GLN Lightning Last 15 m
 - NAPLN/USPLN/GLN Lightning Last 5 min
 - NAPLN/USPLN/GLN Lightning Last 1 min

6083 Viable : 2015-08-23T19:43:00Z-2015-08-23T19:43:00Z 06:01 AAST

Lightning Legend:

- 10T - Annual temp. ≥ 1 Light
- 1.3°C < 10T - Annual temp. ≥ 1
- 1.5°C < 10T - Annual temp. ≥ 1
- 1.7°C < 10T - Annual temp. ≥ 1
- 1.9°C < 10T - Annual temp. ≥ 1
- 2.1°C < 10T - Annual temp. ≥ 1
- 2.3°C < 10T - Annual temp. ≥ 1
- 10T - Annual temp. ≥ 1

Connection: mblack_ghoc @ 10:58:41 drop 17 loc 20 1954c britany_jvd @ 19:06:23 Can you give us the drop # and time of drops for the part of the track going between the Bahamas and Cuba? rmcroder @ 16:36:28 has joined the conversation. mblack_ghoc @ 10:58:41 drop 14 1919c offe ready tomm @ 00:00:28 has quit - Out. Client has disconnected.

DayLight

29 08 2015 20:04:13 UTC
Science 2, AV-6 Daylight 19.0° C



29 08 2015 20:08:30 UTC
Science 2, AV-6 Daylight 19.0° C



29 08 2015 20:08:55 UTC
Science 2, AV-6 Daylight 19.0° C



29 08 2015 20:09:46 UTC
Science 2, AV-6 Daylight 19.0° C

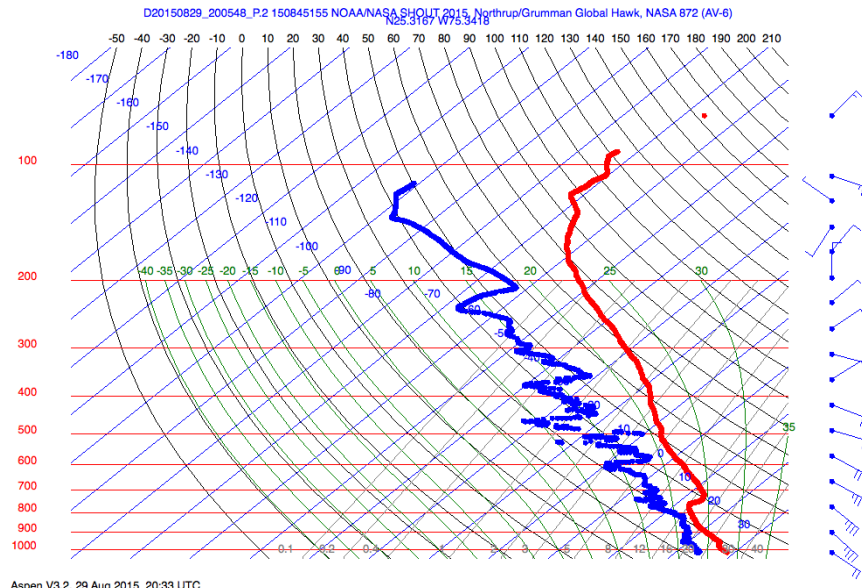


29 08 2015 20:10:28 UTC
Science 2, AV-6 Daylight 19.0° C



29 08 2015 20:12:05 UTC
Science 2, AV-6 Daylight 19.0° C





Drop 18 Loc 21 2005z



29 08 2015 20:13:56 UTC
Science 2, AV-6 Daylight 19.0° C



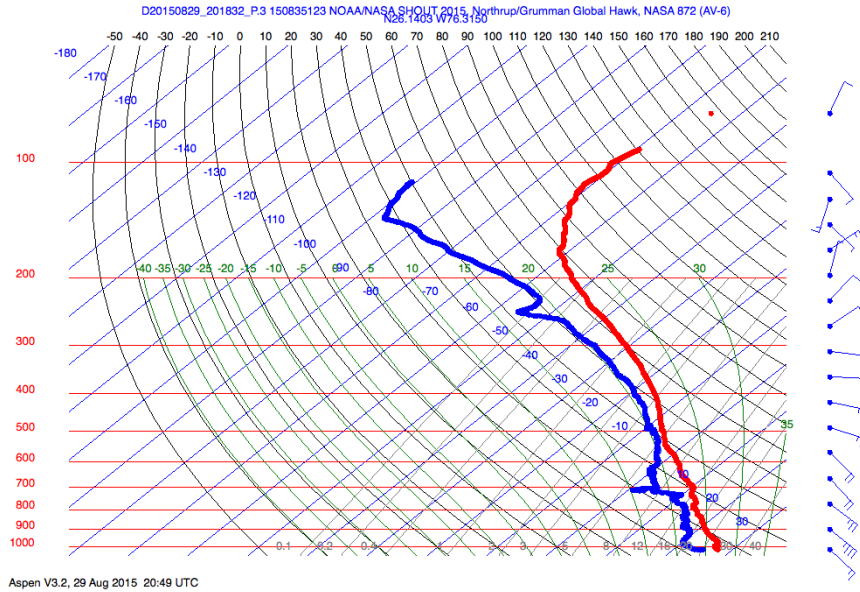
29 08 2015 20:15:08 UTC
Science 2, AV-6 Daylight 19.0° C



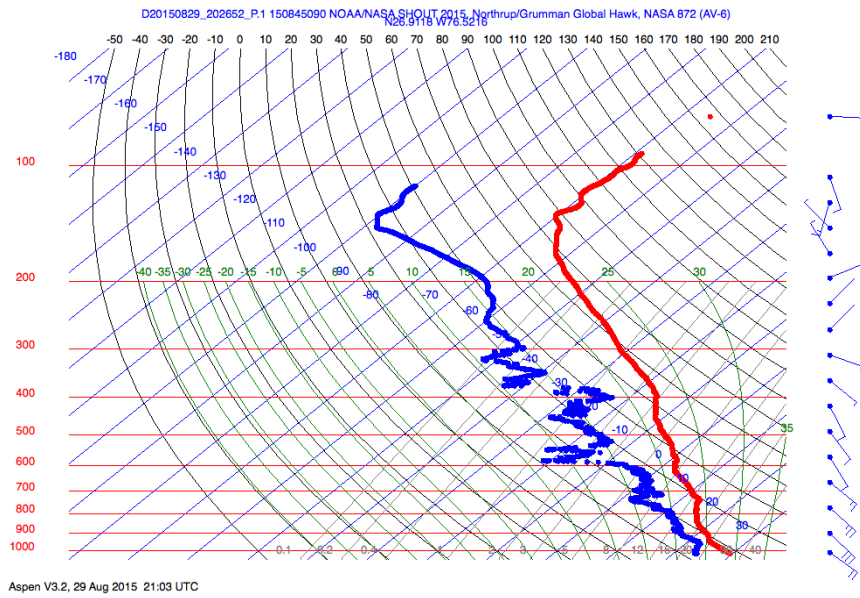


Tried to extend leg between Cuba and Bahamas to further SE but ATC would not allow it

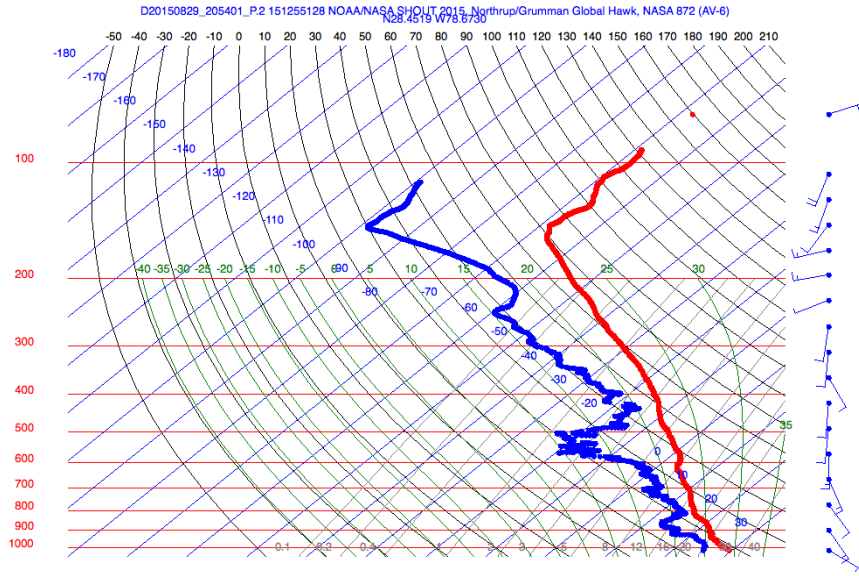
some issues with having the correct current.ftk on the Mac laptop



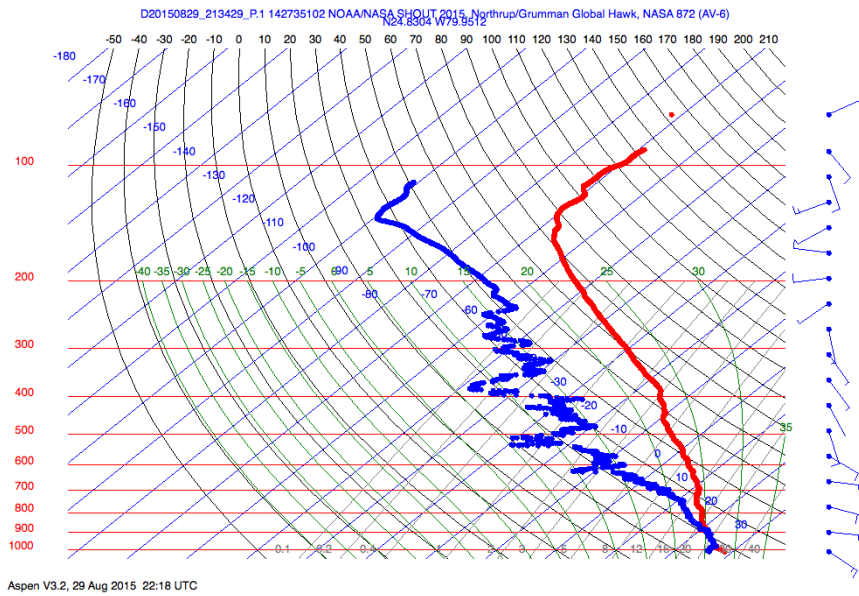
DROP 19 LOC 22 2018Z



DROP 20 LOC 23 2027Z

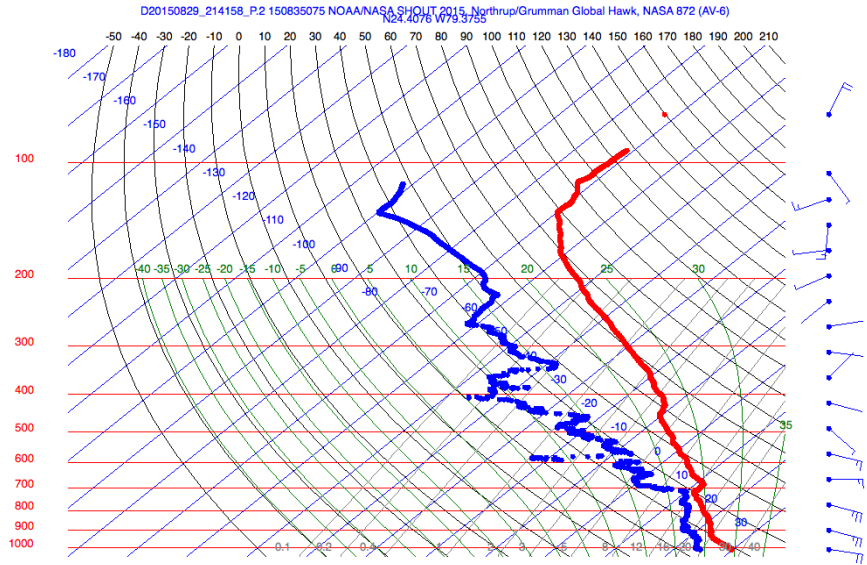


DROP 21 LOC 24 2054Z

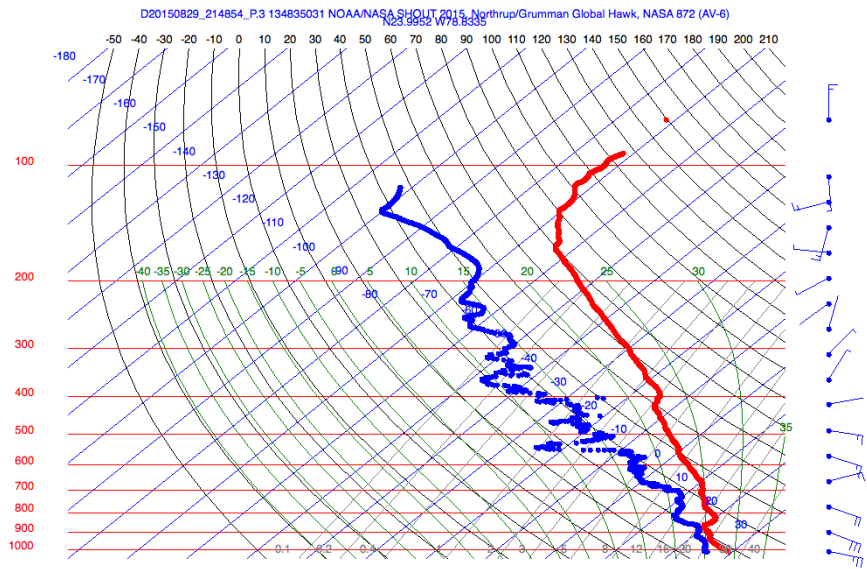


DROP 22 LOC 25 2134Z

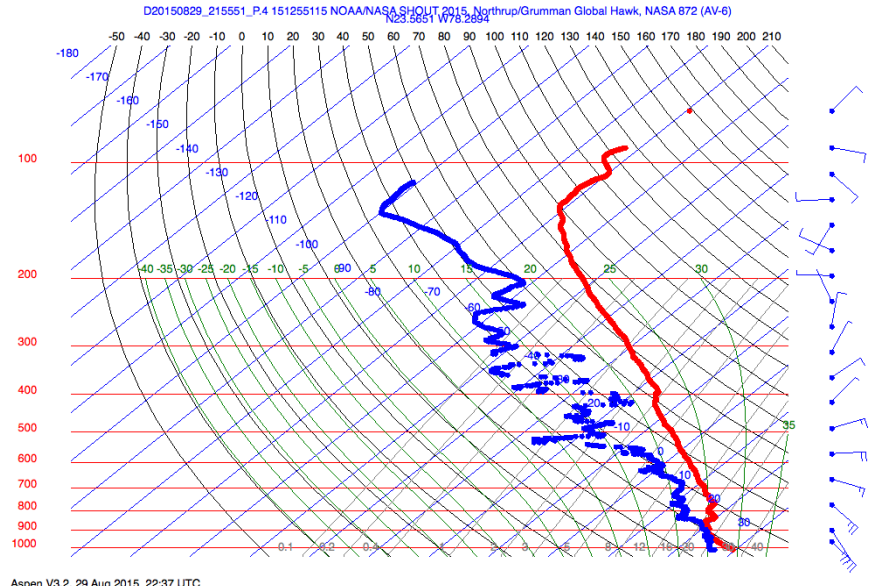
START OF LEG TO THE se ALONG THE COAST OF cUBA



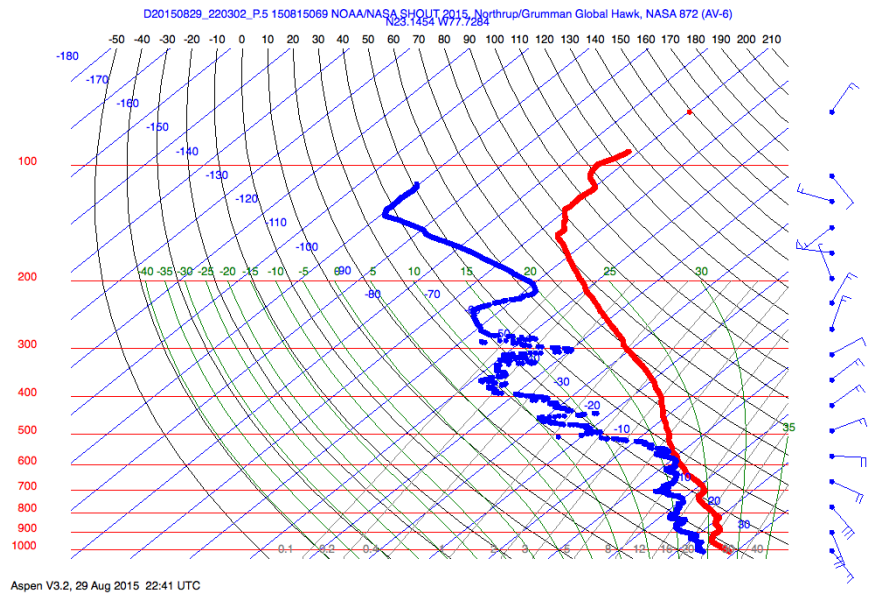
DROP 23 LOC 26 2142Z



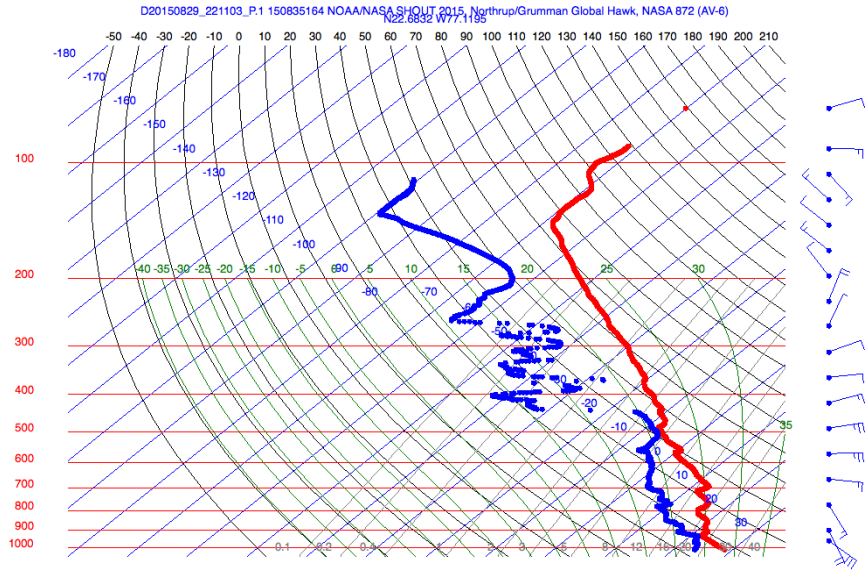
DROP 24 LOC 27 2148Z



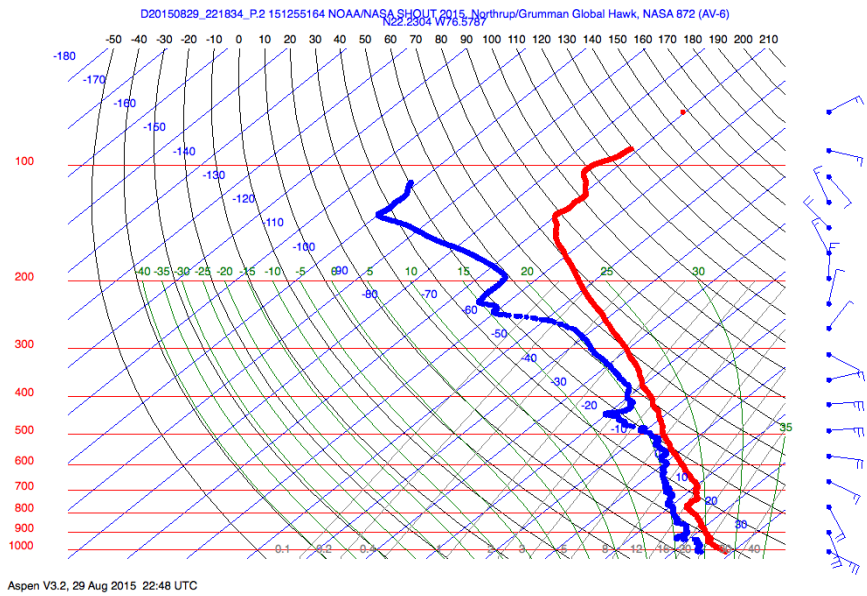
DROP 25 LOC 28 2155Z



DROP 26 LOC 29 2203Z



DROP 27 LOC 30 2210Z



DROP 28 LOC 31 2218Z

Dashboard - Mts... Airborne Scienc... HWRAP_RealTL... Index of /prod/ps... Index of ftp://tl... Ocean Coverage... Atlantic 2-Day G... NASA/MSC Int... mts.nasa.gov/group/shout

Global Hawk AV6 (NR72NA) 2015-08-29T22:49:49Z (About 29 seconds ago) Actions 20 952, -77 942

GOES Infrared

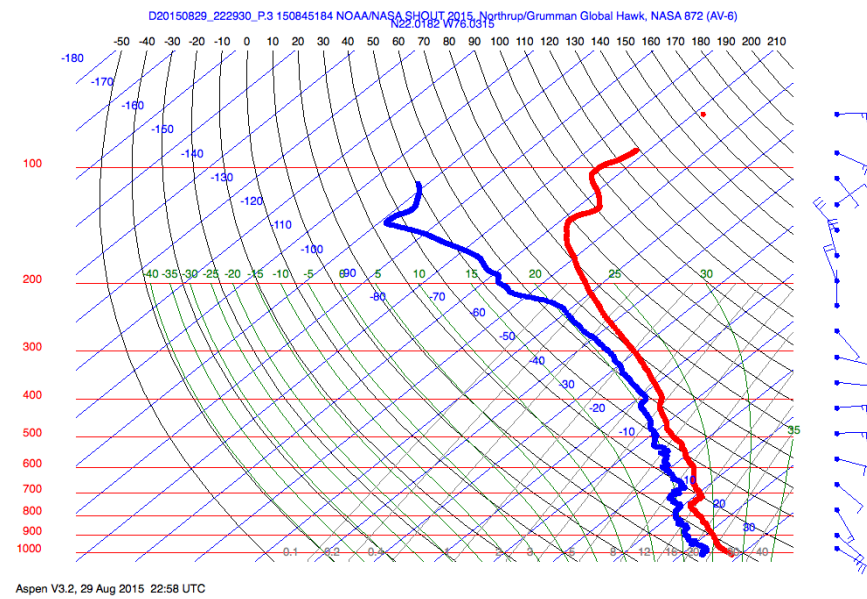
- GOES Visible
- GOES Water Vapor 4km
- GOES West IR 4km
- GOES East IR 4km
- NRL Satellite Products
- CIAMS/ISCC Satellite Products
 - Brightness Temperature
- GOES East Wind Products
- Saharan Air Layer Products
- Cloud Top Products
 - Tropical Overshooting Tops
 - Full Basin Cloud Top Height (Pres)
 - GH Centric Cloud Top Height (Pres)
 - GH Centric & Full Basin CTH (Pres)
- Total Precipitable Water Products
- GOES West Wind Products

Connection: #flood, #HQ, #Kansai

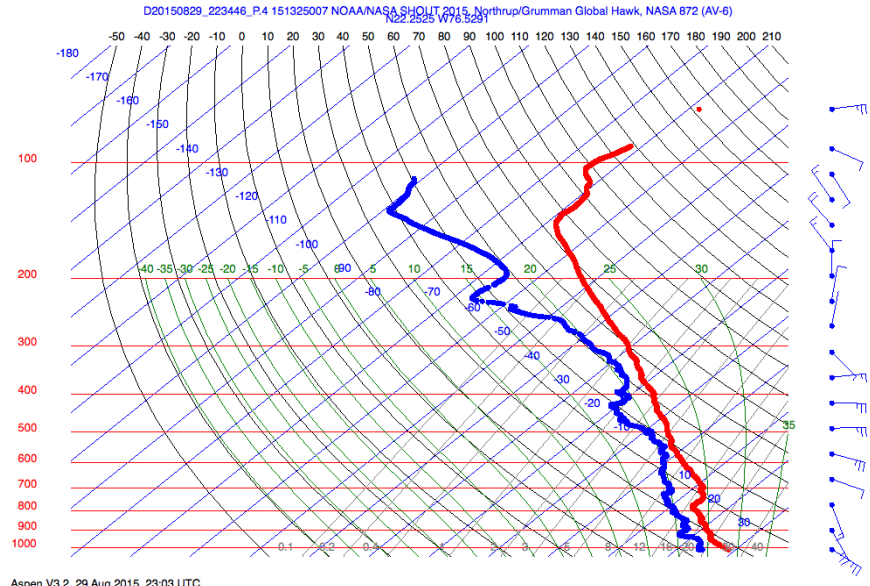
Obairan @22:31 has joined the conversation.
 mtauderl @22:38:16 Drop 33, 2235Z
 mblack_ghoc @22:41:37 DROP 31 LOC 34 2240Z
 Stan_HSID @22:44:09 has quit. Quit: Client has disconnected.
 mblack_ghoc @22:47:30 DROP 32 LOC 35 2246Z

DayLight

2226Z- se POINT 21.8 n 76w TURN AROUND FOR RECIPROCAL leg to NW

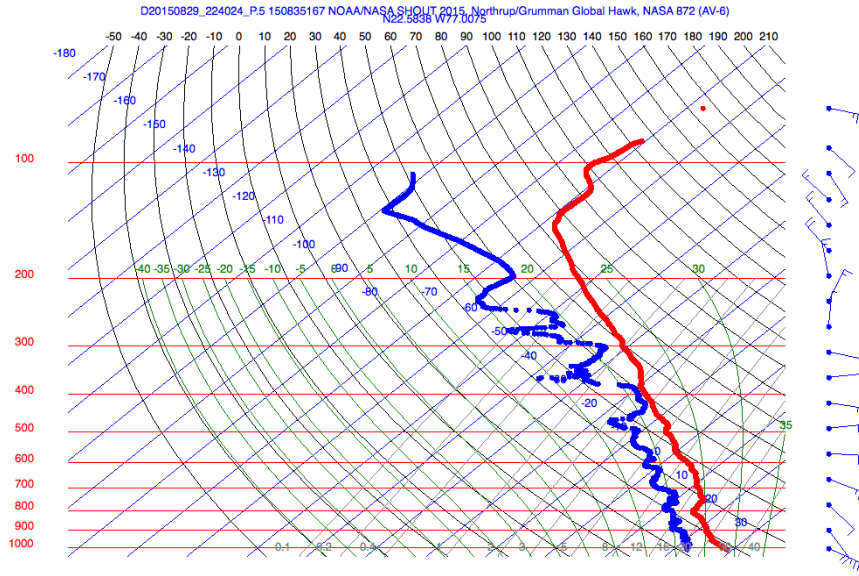


DROP 29 LOC 32 2229Z



DROP 30 LOC 33 2234Z





DROP 31 LOC 34 2240Z

DROP 32 LOC 35 2246Z



DROP 33 LOC 36 2252Z

29 08 2015 22:58:07 UTC
Science 2, AV-6 Daylight 18.0° C



29 08 2015 22:59:34 UTC
Science 2, AV-6 Daylight 18.0° C



Dashboard - Mis... x Airborne Scienc... x HIWRAP_RealTi... x Index of /psd/ps... x Index of ftp://ft... x Ocean Coverage... x Atlantic 2-Day G... x NASA/MSFC Int... x +

mts.nasa.gov/group/shout

Projects Michael Black

Dashboard Documents

Global Hawk AV6 (N872NA) 2015-08-29T23:00:41Z (About 27 seconds ago) Actions 26.451, -82.005

- Brightness Temperature
- GOES East Wind Products
- Saharan Air Layer Products
- Cloud Top Products
 - Tropical Overshooting Tops
 - Full Basin Cloud Top Height (Press...
 - GH Centric Cloud Top Height (Press...
 - GH Centric & Full Basin CTH (Press...
- Total Precipitable Water Products
- GOES West Wind Products
- JPL TCIS Products
- LeRC Products
- Aircraft Payload
 - Stormscope (NASAB72, AV6)
 - HAMS Quick Looks
 - Storm Center Locations
 - Relative

Legend for TO1-Anvil temp:

- Light Blue: TO1-Anvil temp > -13°C
- Blue: -13°C < TO1-Anvil temp < -15°C
- Green: -15°C < TO1-Anvil temp < -17°C
- Yellow: -17°C < TO1-Anvil temp < -19°C
- Orange: -19°C < TO1-Anvil temp < -21°C
- Red: -21°C < TO1-Anvil temp < -23°C
- Dark Red: -23°C < TO1-Anvil temp < -25°C
- Black: TO1-Anvil temp < -25°C

Connection #shout x #HRD x #arcab x

mblack_ghoc @ 22:54:25
DROP 33 LOC 36 2252Z

cbarnes @ 22:54:34
has quit... Ping timeout

brittany_hrd @ 22:56:26
caught up to drop 28

mblack_ghoc @ 22:59:43
GREAT JOB BRITTANY

mblack_ghoc @ 23:00:01
DROP 34 LOC 37 2258Z

Type message...

N872NA

02:08 2015-23:03:15 UTC
Solera 2, AV-6 Daylight 160° C

Daylight

29 08 2015 23:02:00 UTC
Science 2, AV-6 Daylight 18.0° C



29 08 2015 23:02:45 UTC
Science 2, AV-6 Daylight 18.0° C



29 08 2015 23:04:10 UTC
Science 2, AV-6 Daylight 18.0° C



29 08 2015 23:05:14 UTC
Science 2, AV-6 Daylight 18.0° C



29 08 2015 23:11:23 UTC
Science 2, AV-6 Daylight 18.0° C



29 08 2015 23:07:44 UTC
Science 2, AV-6 Daylight 18.0° C



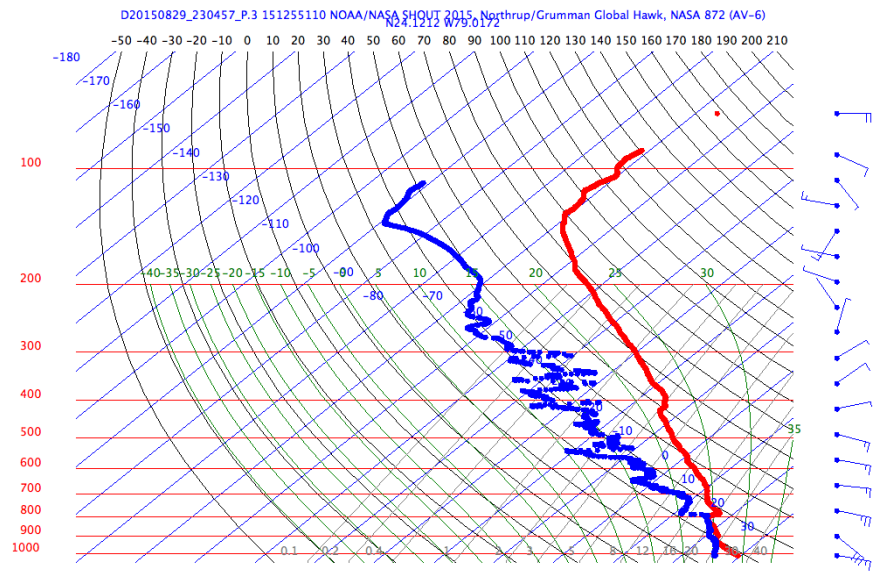
29 08 2015 23:08:50 UTC
Science 2, AV-6 Daylight 18.0° C



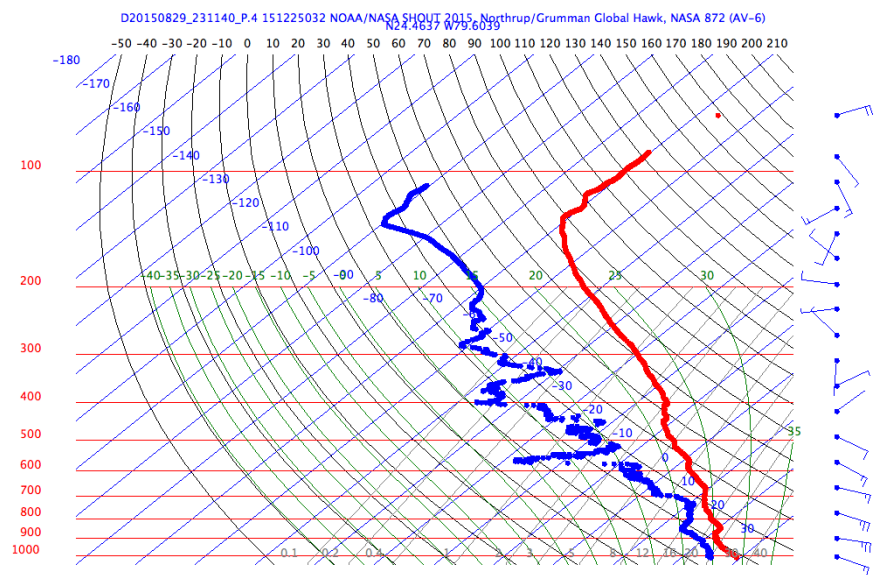
29 08 2015 23:10:39 UTC
Science 2, AV-6 Daylight 18.0° C



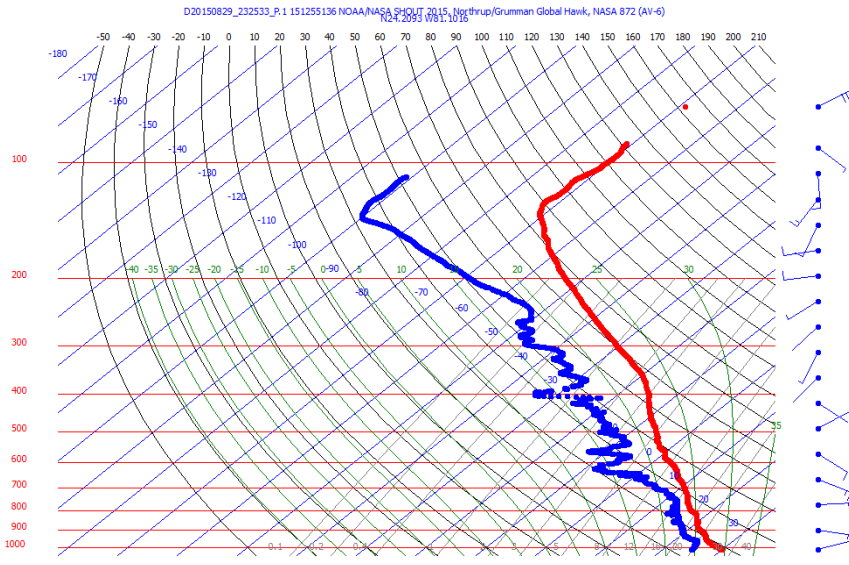
DROP 34 LOC 37 2258Z



DROP 35 LOC 38 2304Z



DROP 36 LOC 39 2311Z



Aspen V3.2, 30 Aug 2015 02:39 UTC

DROP 37 LOC 40 2325Z

2311z FINISHED se-nw LEG - HEADING THROUGH FLORIDA STRAITS

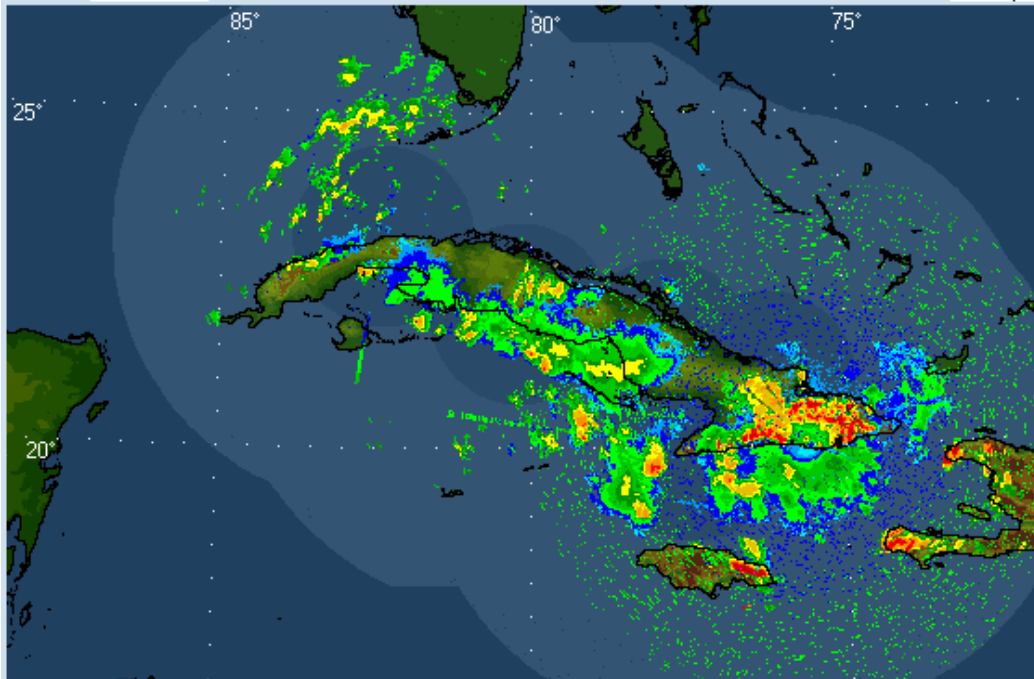


29 08 2015 23:20:00 UTC
Science 2, AV-6 Daylight 18.0° C

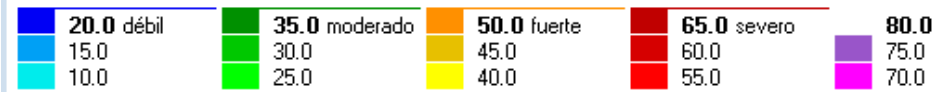


Fecha: 29/08/2015

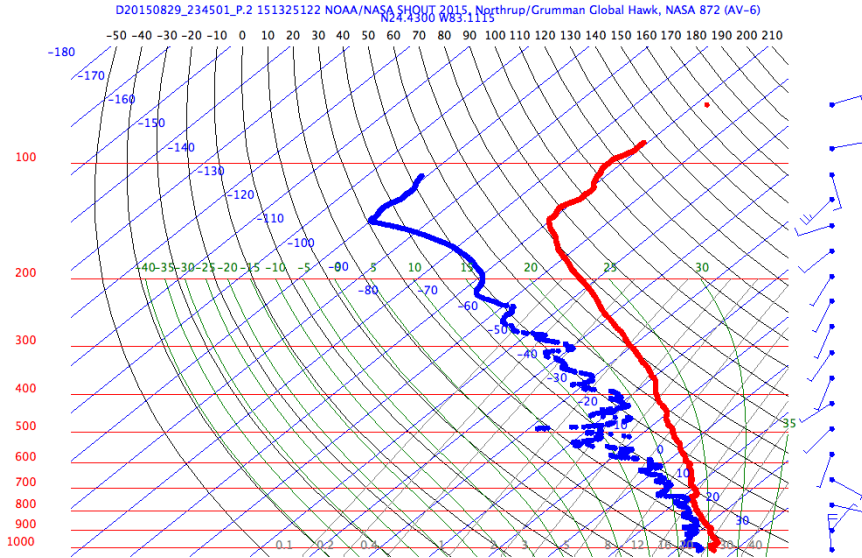
Hora local: 07:15 pm



Escala de intensidades (dBZ)



Cuban radar composite 2315Z showing sea breeze thunderstorm development along the south coast west of the former-Erika mid-level vortex and curved band east of mid-level vortex center off eastern tip of Cuba.



Aspen V3.2, 30 Aug 2015 06:43 UTC

DROP 38 LOC 41 2344Z

Global Hawk AV6 (N872NA) 2015-08-29T23:47:00Z (About 33 seconds ago) Actions 23.610, -82.168

- WP-3D (NOAA442) Plan 1
- WP-3D (NOAA443) Plan 1
- WP-3D (NOAA443) Plan 2
- G-IV (NOAA449) Plan 1
- G-IV (NOAA449) Plan 2
- WB-57 (NASA928) Plan 1
- WB-57 (NASA928) Plan 2
- TCI WB-57 (1)
- TCI WB-57 (2)
- Pilot Situational Awareness
 - Tropical Overshooting Tops
 - Full Basin Cloud Top Height (Pressure Alt)
 - CTH/TOT/Lightning
 - CTH/Lightning
 - Lightning Last 10 min (Flashes)
- ONR TCI Products
- Administrative Boundaries

Cloud Height in Pressure Altitude Coordinates (kft)

Legend for CTH/TOT/Lightning:

- Lightning
- 13°C < TOT-Arvll temp > -13°C
- 15°C < TOT-Arvll temp < -15°C
- 17°C < TOT-Arvll temp < -17°C
- 19°C < TOT-Arvll temp < -19°C
- 21°C < TOT-Arvll temp < -21°C
- 23°C < TOT-Arvll temp < -23°C

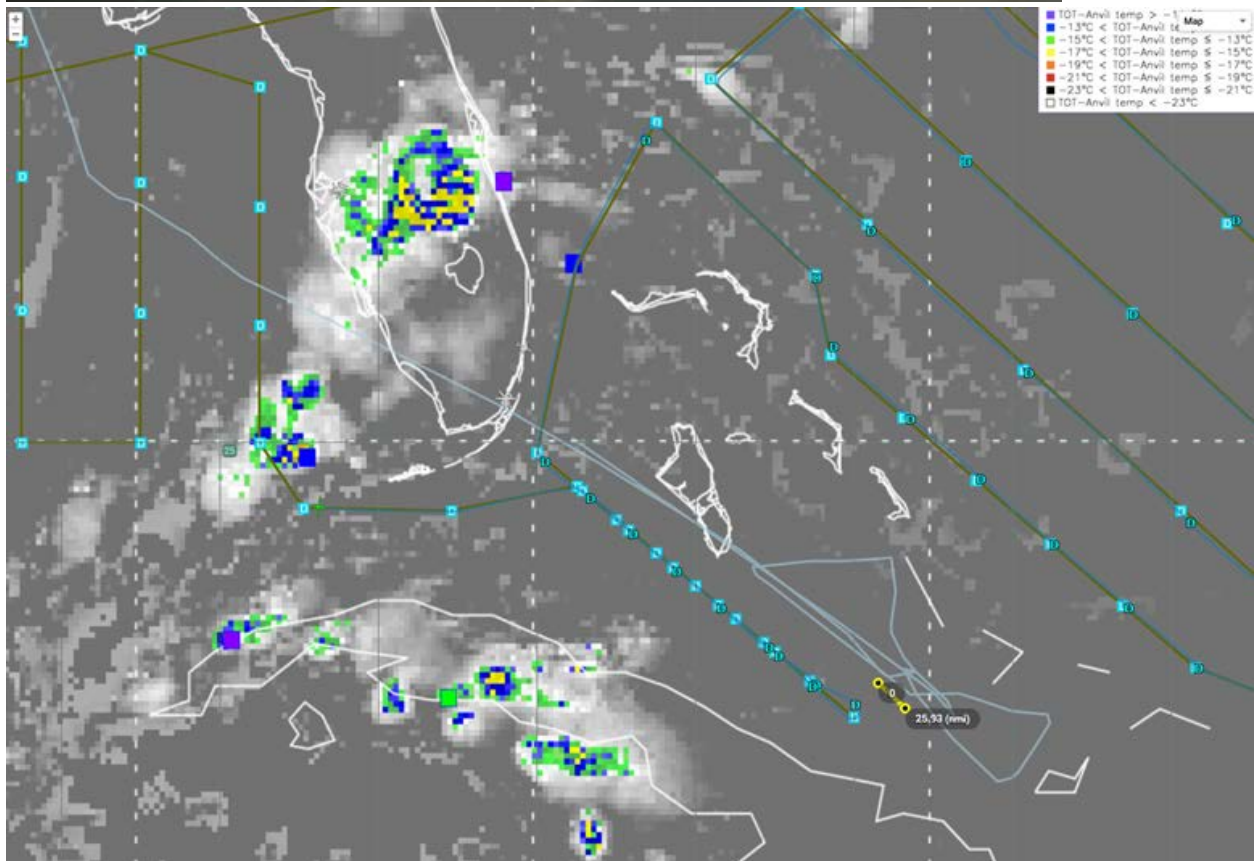
Chat Window:

- ehendricks @23:15:05 has joined the conversation.
- jason_d_hrd @23:15:55 has quit... Quit: This computer has gone to sleep.
- gmhymmsfield1 @23:33:59 has quit... Quit: Client has disconnected.
- ehendricks @23:34:15 has quit... Quit: Client has disconnected.
- nlaudier1 @23:46:49 Drop 38, loc 41, 2344Z

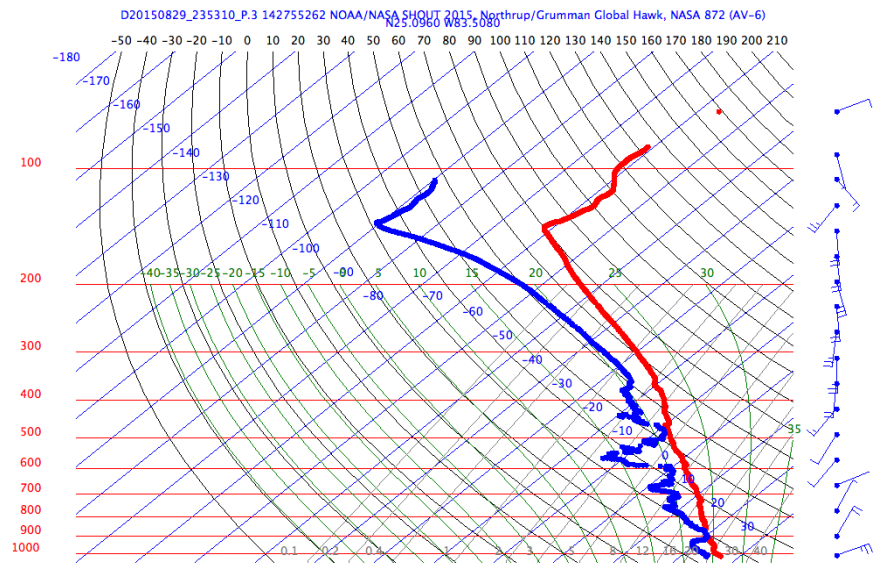
N872NA

02:08:30:15:23:30:00 UTC
 Science 2, AV-6 Daylight 160° C

29 08 2015 23:20:00 UTC
Science 2, AV-6 Daylight 18.0° C



Overshooting tops Aug 29, 2344Z



drop 39 LOC 42 2353Z

KU WILL BE DOWN FOR ABOUT AN HOUR WHILE THE ANTENNA IS REPOINTED

Update #5 flight plan for : x GH_20150829 Sonde Log x SHOUT RF02 082915 - Eri x

https://docs.google.com/spreadsheets/d/167hGKMTLQ2VYsjk45V3pPFNEHGpQZVoqJKyrpozTs/edit#gid=0

GH_20150829 Sonde Log

File Edit View Insert Format Data Tools Add-ons Help Last edit was made seconds ago by Kathryn Sellwood - NOA

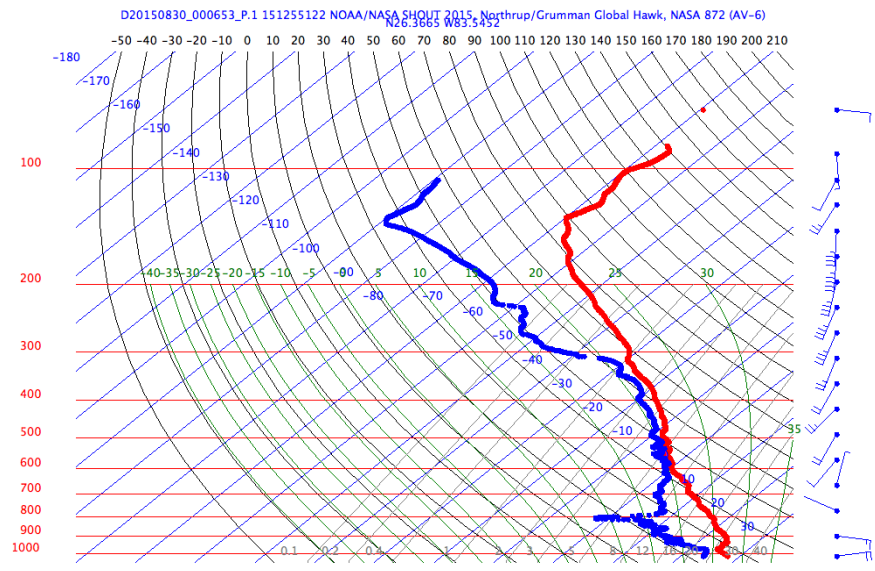
Comments Share

fx 18

	A	B	C	D	E	F	G	H	I
1	LOCATIC DROP#	TIME	OB#	MSLP	SFC WIND	GTS	ESRL	COMMENTS	
2	1	1	1312	1	1019 342/20 kt	y	y	At drop point 2 - first drop point was skipped due to	
3	2	2	1338	2	1019 132/12	y	y	good drop	
4	3	3	1406	3	1021 98/12	y	y	good drop	
5	4	4	1433	4	1019 101/16	y	y	removed two lowermost winds	
6	5	5	1503	5	1020 72/14	y	y	good drop	
7	6	6	1518	6	1021 85/14	y	y	good drop	
8	7	7	1543	7	1019 100/20	y	y	good drop	
9	8	8	1610	8	1019 100/18	y	y	good drop	
10	9	9	1637	9	1019 119/14	y	y	skipping next two drops due to air traffic	
11	10							drop skipped	
12	11							drop skipped	
13	12							drop skipped	
14	13	10	1740	10	1017 xx/xx	y	y	Removed lowermost winds	
15	14	11	1806	11	1017 xx/xx	y	y	Removed lowermost winds	
16	15	12	1832	12	1015 115/18	y	y	good drop	
17	16	13	1858	13	1015 120/11	y	y	good drop	
18	17	14	1919	14	1015 115/15	y	y	good drop	
19	18	15	1930	15	1016 xx/xx	y	y	Removed lowermost winds	
20	19	16	1943	16	1016 140/14	y	y	good drop	
21	20	17	1954	17	1016 130/20	y	y	good drop	
22	21	18	2005	18	1016 120/21	y	y	good drop	
23	22	19	2018	19	1016 130/20	y	y	good drop	
24	23	20	2026	20	1015 xx/xx	y	y	Removed lowermost winds	
25	24	21	2054	21	1015 120/10	y	y	good drop	
26	25	22	2134	22	1011 120/21	y			
27	26	23	2142	23	1010 xx/xx	y	y		
28	27	24	2148	24	1010 105/25	y			
29	28	25	2155	25	1010 xx/xx	y	y		
30	29	26	2203	26	1011 xx/xx	y	y		
31	30	27	2211	27	1011 xx/xx	y	y		
32	31	28	2218	28	1011 120/25	y	y		
33	32	29	2229	29	1011 xx/xx	y	y		

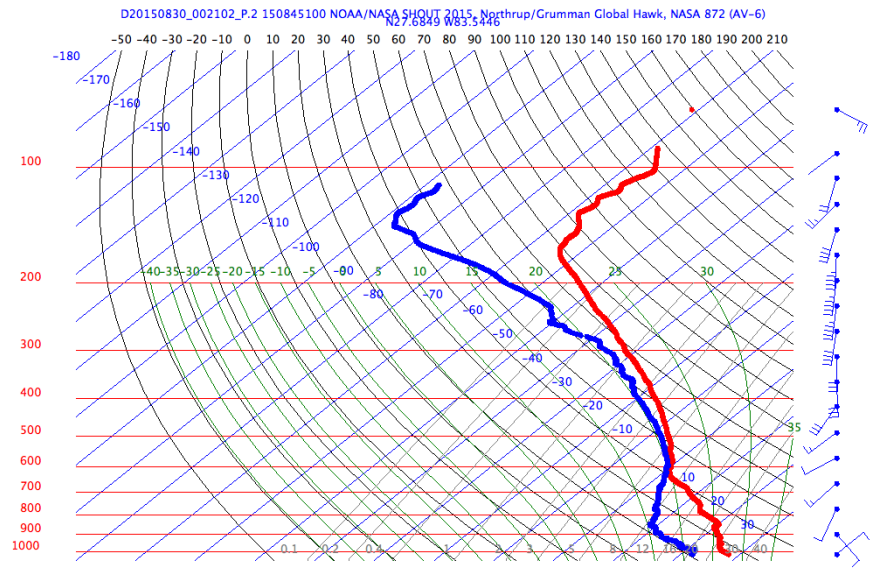
Sheet1

Sum: 21439



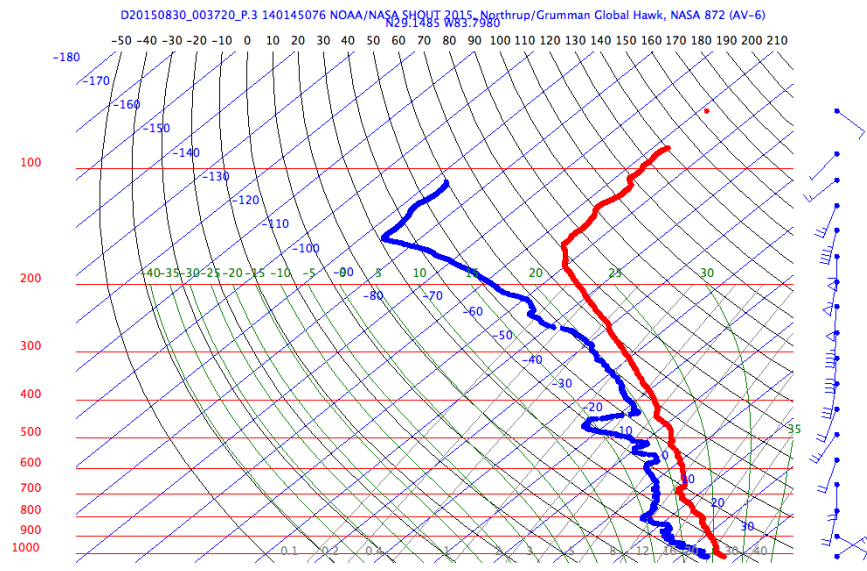
Aspen V3.2, 30 Aug 2015 07:03 UTC

DROP 40 LOC 43 0007Z

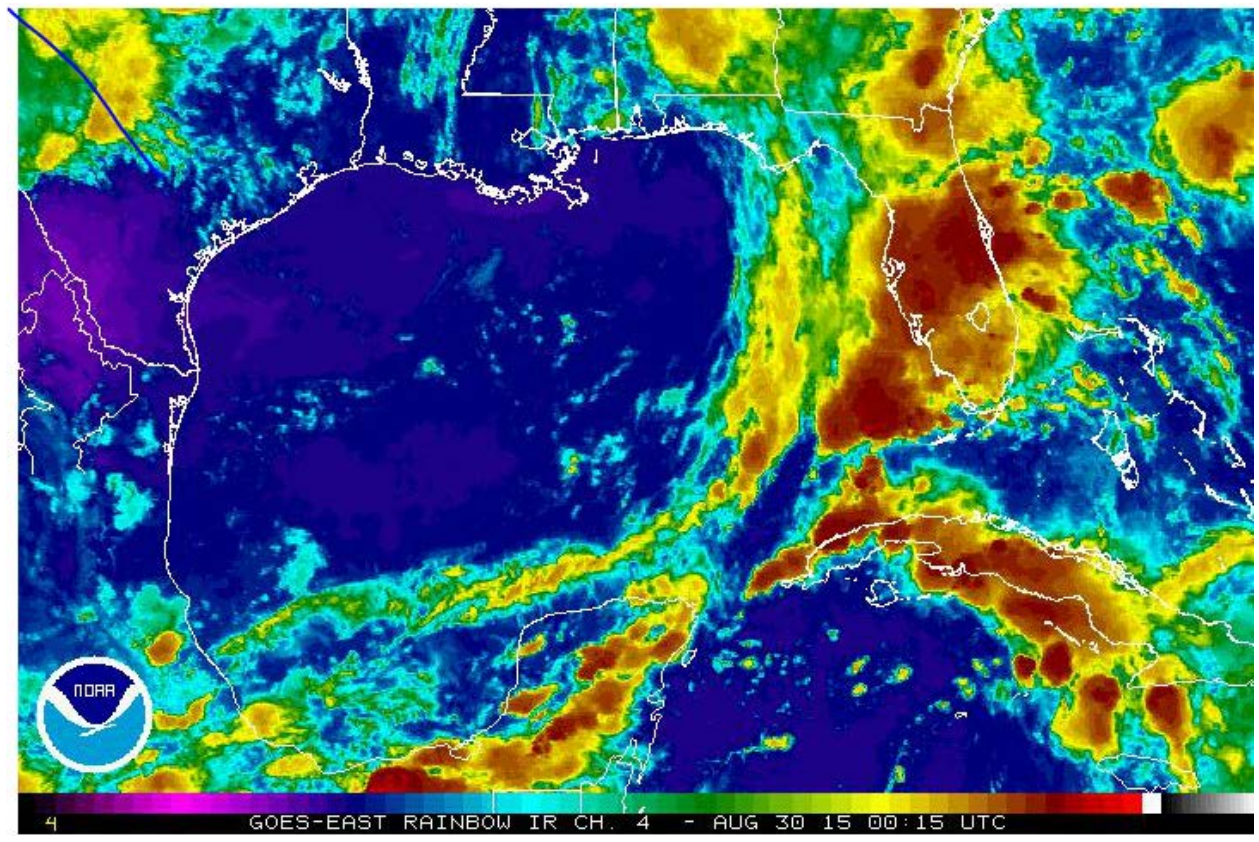


Aspen V3.2, 30 Aug 2015 07:10 UTC

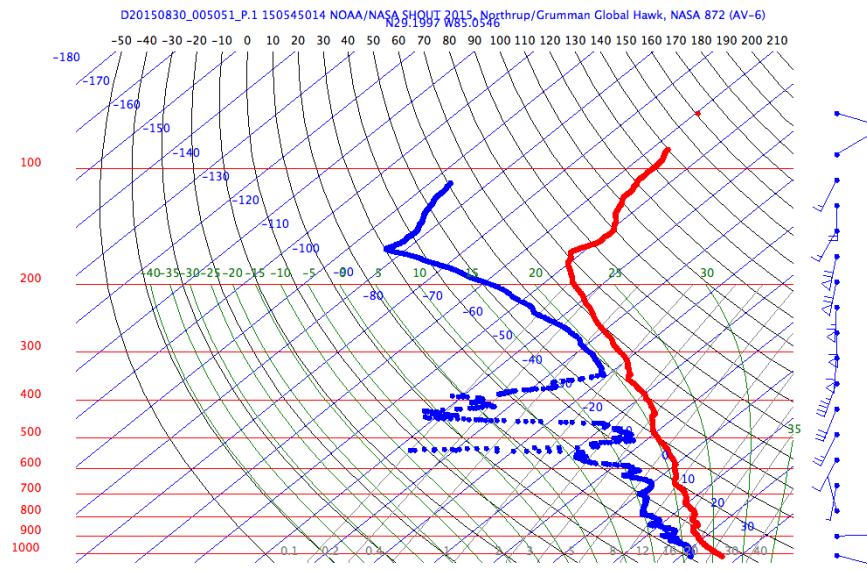
DROP 41 LOC 44 0021Z



DROP 42 LOC 45 0037Z

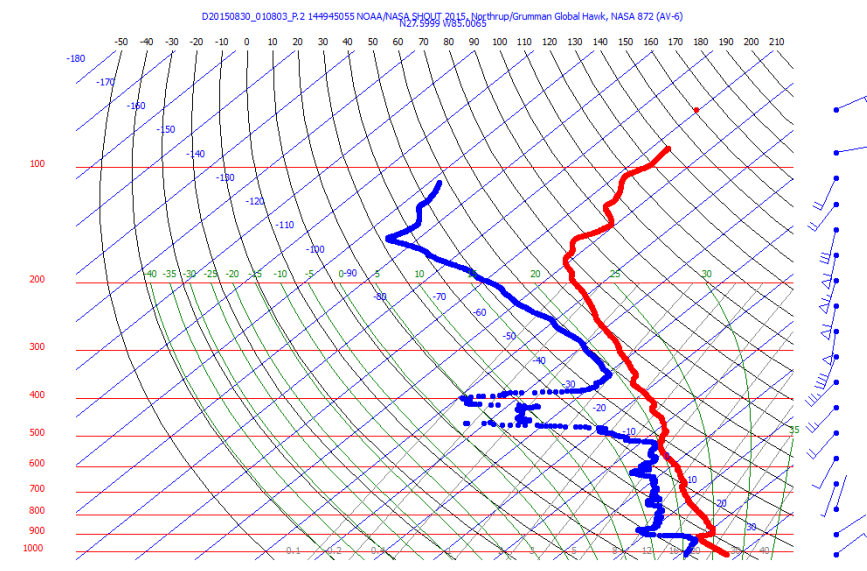


Current IR image



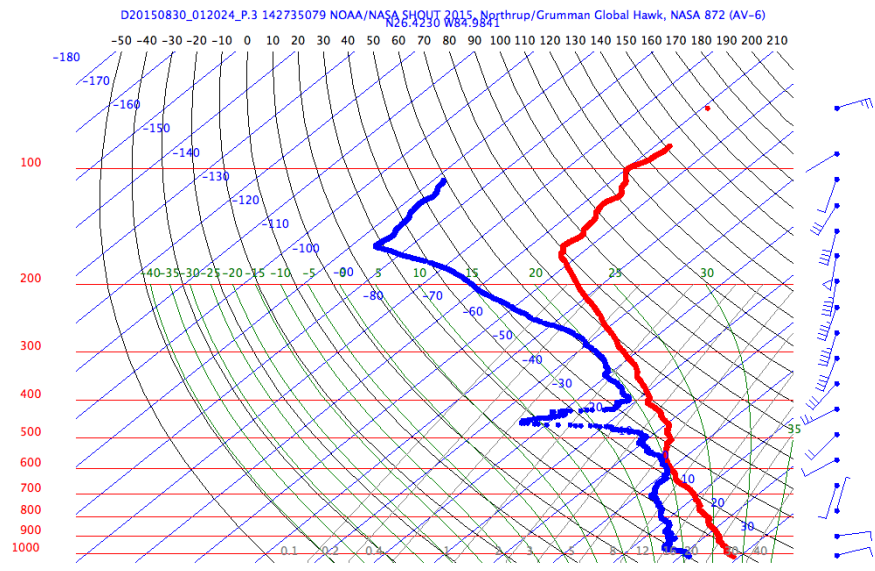
Aspen V3.2, 30 Aug 2015 07:25 UTC

DROP 43 LOC 46 0050Z



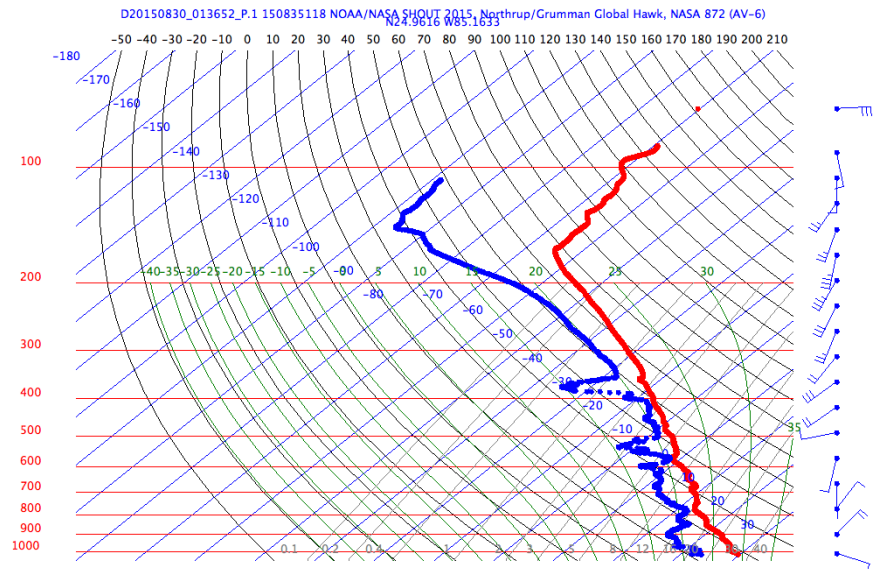
Aspen V3.2, 30 Aug 2015 04:53 UTC

DROP 44 29 nm south of LOC 47 0107Z



Aspen V3.2, 30 Aug 2015 07:32 UTC

DROP 45 LOC 48 0120Z

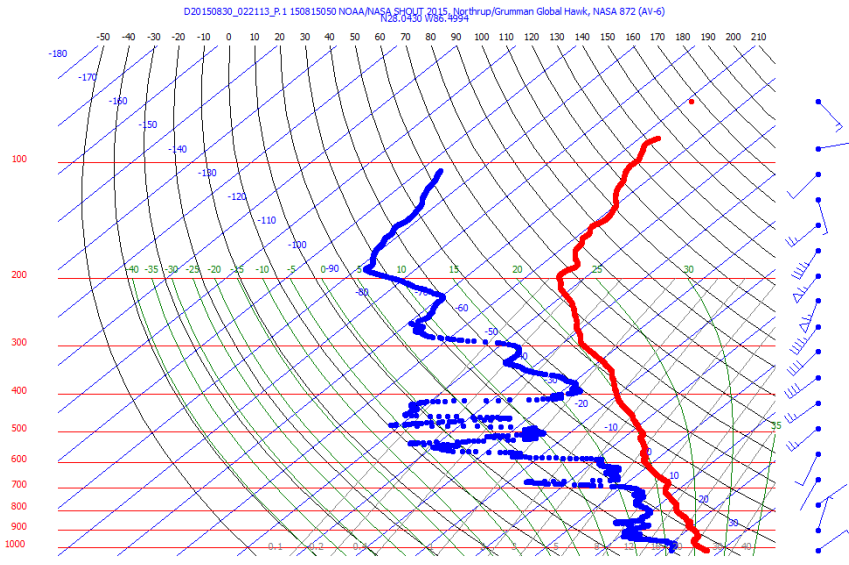


Aspen V3.2, 30 Aug 2015 07:39 UTC

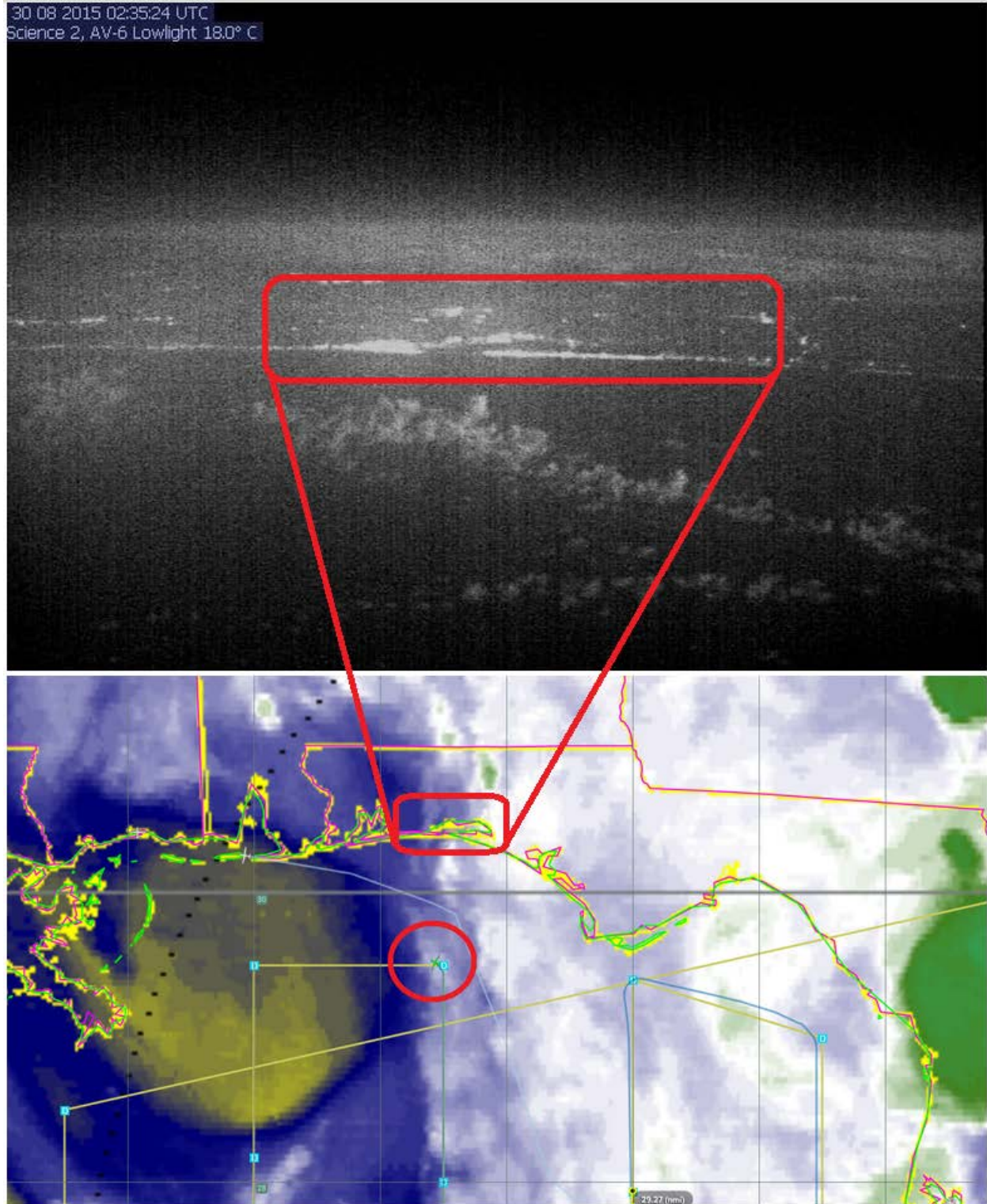
DROP 46 LOC 49 0136Z

DROP 47 LOC 50 0150Z

DROP 48 LOC 51 0205Z



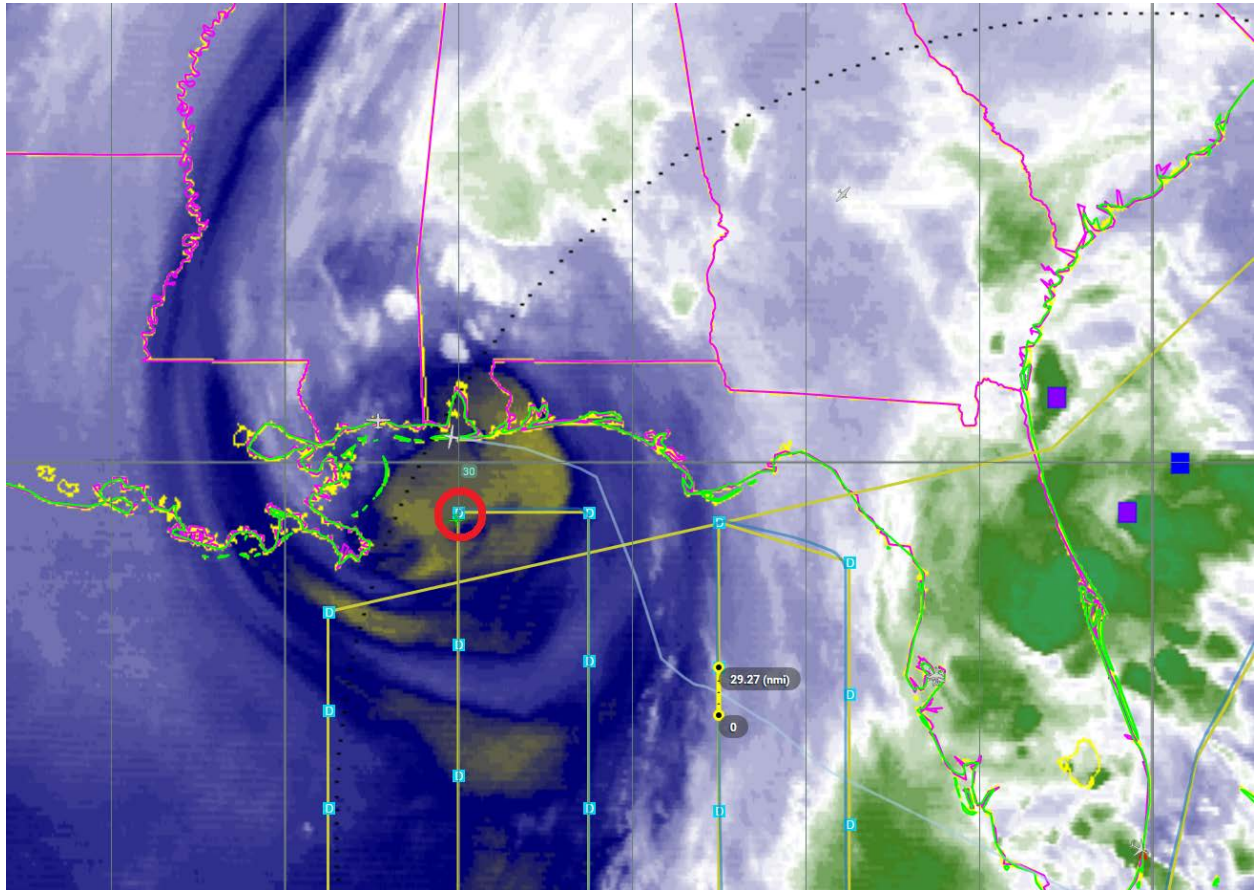
DROP 49 LOC 52 0221Z



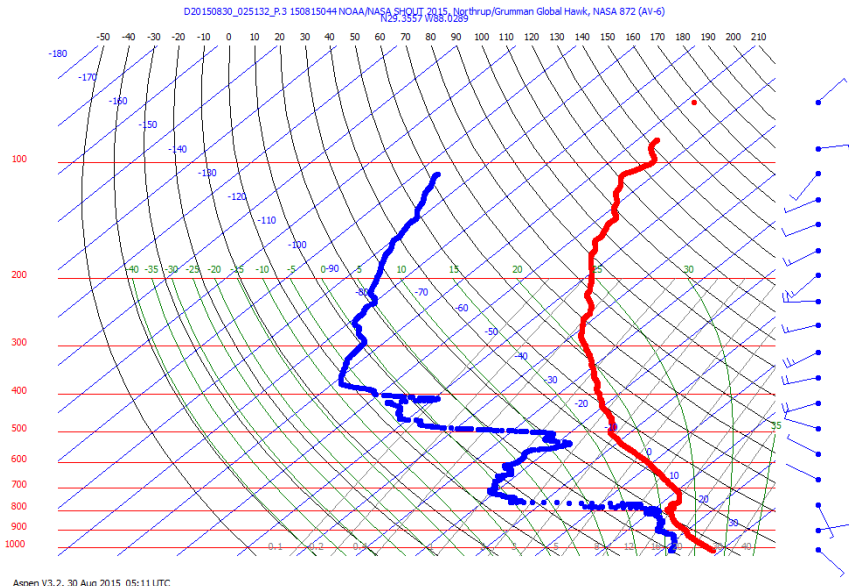
0235z: View of coastline and city lights from AV-6 LowLight camera, looking toward Destin, FL (above-top). The image was captured just before the Global Hawk was about to make a westward turn in the lawnmower pattern over the northern Gulf of Mexico (above-bottom). Even though there is no over-storm component to the RF02 mission, a crucial part of the forecast for the potential development and path of the remnants of Erika (presently just north of the Cuban

coastline, with potential to redevelop into TS “Fred” within the next 48 hours), hinges on the NWP models’ initialization and handling of the large cut-off upper Low to the south of Mobile, AL. The next AVAPS sonde drop in this pattern will help to determine the atmospheric profile within the center lobe of this synoptic feature.

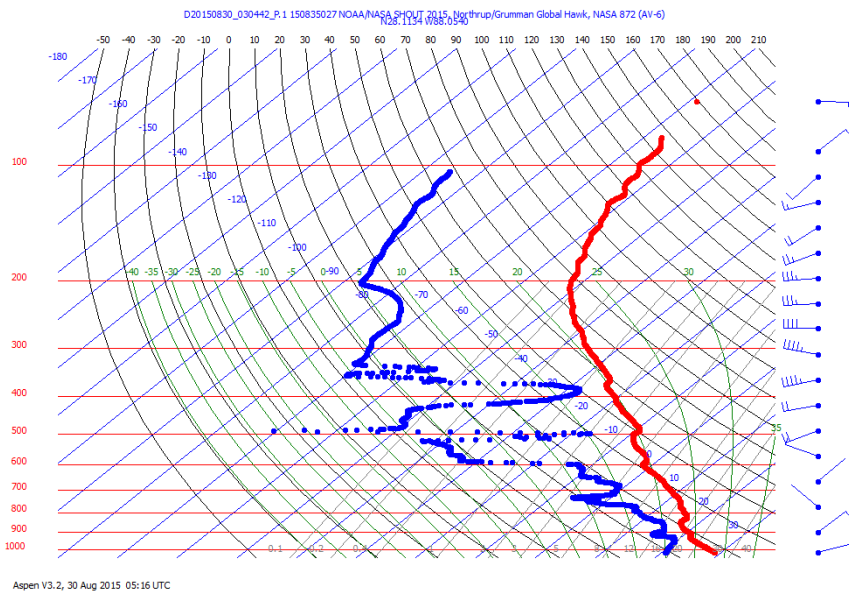
DROP 50 LOC 53 0237Z



0251z: AVAPS drop at turn in center of upper Low over northern Gulf.



DROP 51 LOC 54 0251Z



DROP 52 LOC 55 0304Z

DROP 53 LOC 56 0318Z

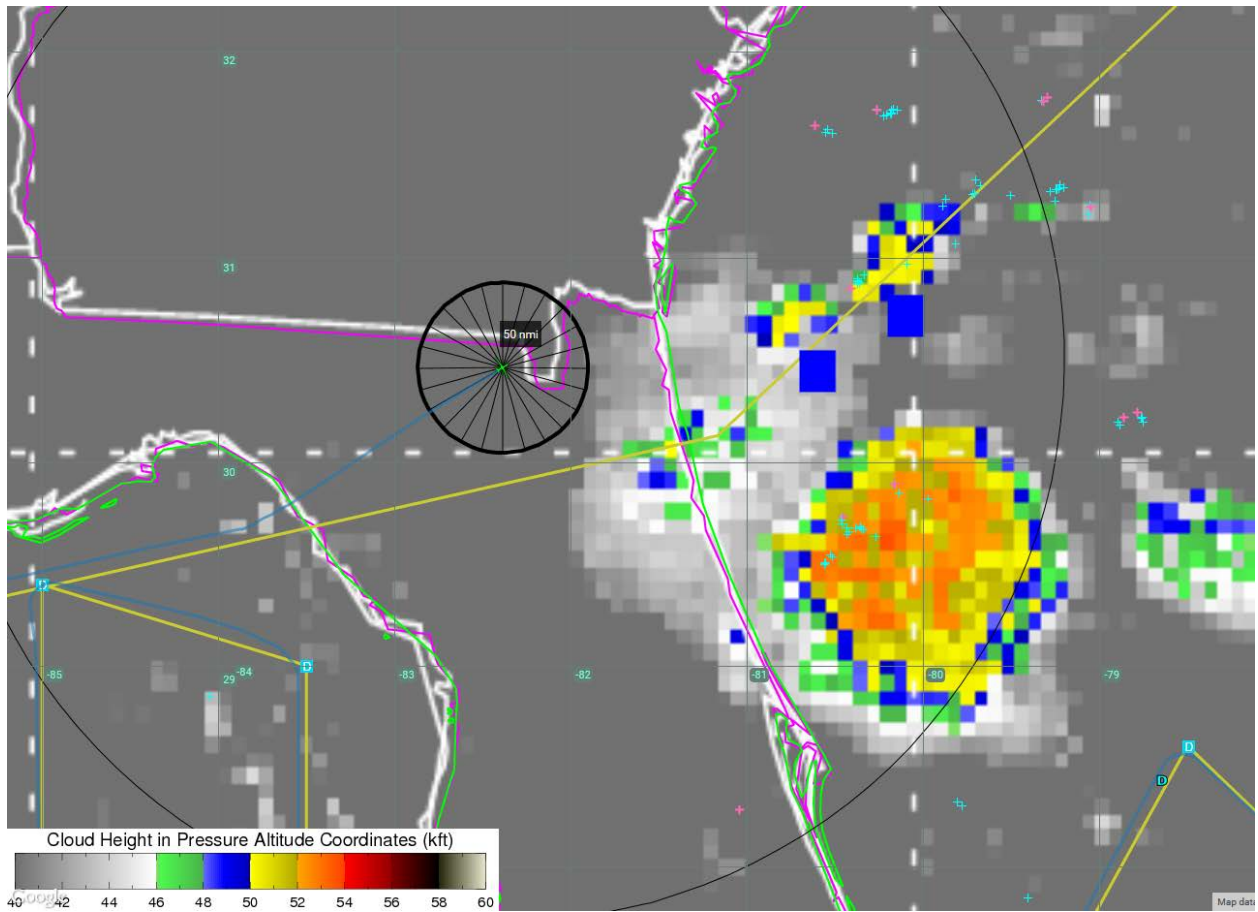
DROP 54 LOC 57 0333Z

DROP 55 LOC 58 0347Z

DROP 56 LOC 59 0355Z

DROP 57 LOC 60 0406Z

DROP 58 LOC 61 0419Z



0530Z: GH makes a diversion from flight track to avoid significant convection on the transit to Wallops.

30 08 2015 05:52:13 UTC
Science 2, AV-6 Lowlight 19.0° C



30 08 2015 05:53:15 UTC
Science 2, AV-6 Lowlight 19.0° C



0553z: Overshooting tops (barely) detected by AV-6 LowLight camera to the northeast of Jacksonville, FL during homeward transit.



0627z: "Star-rise" over horizon (right side of each image), as visible from AV-6 LowLight camera.

0800 Z Clean up shift arrive - Paul Newman and Gary Wick

0855Z NWS Forecast for Tampa area (if relevant for sensitivity studies):

forecast.weather.gov/MapClick.php?map.x=144&map.y=135&site=tw8zmx:1&zmy=1#VelE4jMi-U

Dashboard - Tropical Depr... List of CTH produ... CIMSS Tropic... Jimena - Satel... ESRL : PSD : P... Hurricane Ign... HIWRAP_Real... RAL | Tropical... 7-Day For...

Your local forecast office is **Tampa Bay, FL** beginning on Sunday. Meanwhile, the Eastern Pacific remains active, with advisories continuing to be issued for Jimena and Ignacio. [Read More...](#)

Hazardous Weather Conditions

- Flood Watch in effect from August 30, 08:00 AM EDT until August 31, 08:00 PM EDT
- Hazardous Weather Outlook

En Español Share | Facebook Twitter YouTube

Current conditions at **Tampa, Vandenberg Airport (KVDF)**
Lat: 28.02°N Lon: 82.34°W Elev: 16ft.










Fair
73°F
23°C

Humidity 94%
Wind Speed N 3 mph
Barometer 29.98 in
Dewpoint 72°F (22°C)
Visibility 7.00 mi
Last update 30 Aug 4:55 am EDT

More Information:
[Local Forecast Office](#)
[More Local Wx](#)
[3 Day History](#)
[Mobile Weather](#)

Extended Forecast for **3 Miles SSW University West FL**

Click here for hazard details and duration

Today	Tonight	Monday	Monday Night	Tuesday	Tuesday Night	Wednesday	Wednesday Night	Thursday
								
30% → 90%	80%	40% → 80%	50%	60%	30%	50%	30%	50%
Heavy Rain	Heavy Rain	Heavy Rain	Heavy Rain	Heavy Rain	Scattered T-storms	Scattered T-storms	Scattered T-storms	Scattered T-storms
High: 89 °F	Low: 73 °F	High: 88 °F	Low: 75 °F	High: 89 °F	Low: 75 °F	High: 89 °F	Low: 76 °F	High: 88 °F

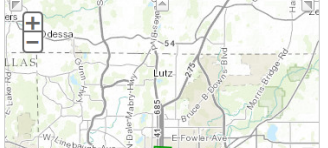
Detailed Forecast

Today Scattered showers and thunderstorms between 10am and 2pm, then showers and possibly a thunderstorm after 2pm. Some of the storms could produce heavy rain. High near 89. Heat index values as high as 99. East southeast wind 3 to 7 mph. Chance of precipitation is 90%. New rainfall amounts between a quarter and half of an inch possible.

Tonight Showers and possibly a thunderstorm, mainly before 2am, then scattered showers and thunderstorms after 2am. Some of the storms could produce heavy rain. Low around 73. Southeast wind around 7 mph. Chance of precipitation is 80%. New rainfall amounts between a quarter and half of an inch possible.

Monday Scattered showers and thunderstorms, then showers and possibly a thunderstorm after noon. Some of the storms could produce heavy rain. High near 88. Heat index values as high as 98. South wind around 8 mph. Chance of precipitation is 80%. New rainfall amounts between a half and three quarters of an inch possible.

Topographic
Click Map For Forecast



Below for further up the coast

NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Erika dissipates, Eastern Pacific tropics remain active
Erika has dissipated as a tropical cyclone and the National Hurricane Center has discontinued advisories for the system. The remnants of Erika could still produce rainfall amounts of 3 to 5 inches or more, along with gusty winds, across southern and central Florida beginning on Sunday. Meanwhile, the Eastern Pacific remains active, with advisories continuing to be issued for Jimena and Ignacio.

Hazardous Weather Conditions
• [Hazardous Weather Outlook](#)

Current conditions at **Cross City Airport (KCTY)**
Lat: 29.63°N Lon: 83.11°W Elev: 39ft

75°F
24°C

Humidity 94%
Wind Speed Calm
Barometer 29.99 in (1015.3 mb)
Dewpoint 73°F (23°C)
Visibility NA
Last update 30 Aug 4:53 am EDT

Extended Forecast for **8 Miles NNE Cedar Key FL**

Today	Tonight	Monday	Monday Night	Tuesday	Tuesday Night	Wednesday	Wednesday Night	Thursday
30% → 70%	60% → 50%	40% → 70%	70%	60%	50%	40%	40%	40%
High: 89 °F	Low: 73 °F	High: 88 °F	Low: 76 °F	High: 89 °F	Low: 76 °F	High: 88 °F	Low: 76 °F	High: 88 °F

Detailed Forecast
Today Scattered showers and thunderstorms between 10am and 2pm, then showers likely and possibly a thunderstorm after 2pm. Some of the storms could produce heavy rain. Mostly cloudy, with a high near 89. Heat index values as high as 98. East wind 3 to 7 mph. Chance of precipitation is 70%. New rainfall amounts between a quarter and half of an inch possible.

AVAPS status report: 58 sondes released; no launcher problems, 1 fast fall. The average launcher temperature was 5-8 degrees warmer than in the previous flight with the added heating employed.

HAMSR: All good, no pressing maintenance concerns. Bjorn said processing got behind when Ku coverage was out over the Gulf, but will be catching up

HIWRAP: Vijay reports instrument performed very well. Just normal post-flight required

LIP: Issue with upward field mill on engine nacelle as noted previously

0937Z Beginning power down of payloads for descent

0943Z Beginning descent to 45000 ft

0950Z At 45k ft, turning instruments back on

1008Z Powering down for last phase

1015Z All off command

1045Z Landed

1045 Spent a lot of time orbiting offshore in W386. This time would have been better spent adding some tracks or sondes.